The attitudes of university academic staff towards e-learning and in-service training in Saudi Arabia : an analytical study

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THE ATTITUDES OF UNIVERSITY ACADEMIC STAFF TOWARDS E-LEARNING AND IN-SERVICE TRAINING IN SAUDI ARABIA: AN ANALYTICAL STUDY

BEING A THESIS SUBMITTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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ABSTRACT

Continuous learning and training for individuals and professions is widespread and necessary in modern societies. New e-learning technologies promise real benefits for training and education. The main objective of this study is to examine how Saudi academics see their role in relation to the development and use of these new learning and training technologies in Saudi Arabia. Academics are at the centre of social change in a traditional society that is changing fast.

Data has been collected through questionnaires and interviews to examine the opinions and attitudes of academic staff towards e-learning in in-service training in Saudi Arabia. In addition, other methods used in this study include: feedback discussions, documentary research and literature review.

The results indicate that neither technology, resources nor attitudes limit the development of innovative curricula in higher education using information communication technology (ICT) in Saudi Arabia. Such development is limited mainly by socio-cultural factors, traditional policies for higher education and the current infrastructure for continuous professional development (CPD) in the country.

Saudi academics are optimistic about Saudi universities being ready and able to offer distance Internet-based learning and training courses. There is nevertheless, a real job to be done in helping Saudi academics appreciate the power and possibility of e-learning.

The development of the Internet-based distance training for continuous professional development depends in Saudi Arabia on changes in higher education policies, academic staff development and policies for in-service training. A new model of the universities and of learning and training are needed to reap the benefits of the new technology.

In conclusion this study revealed that the attitudes of academic staff in Saudi Arabia are highly positive toward using the Internet in teaching and in providing distance courses.

Key terms: Higher education, Internet, Saudi Arabia, academic attitudes, e-learning, e-training, continuous professional development, social change.

DEDICATION

For the ones who paid the price of my involvement in postgraduate studies: My beloved parents, my father, Abdulrazaq; my mother, Luluh; my beloved wife, Jawaher; my brothers and sisters and my children, Haifa, Yzeed, Abdulrazaq, Muhammad, Abdullah and Nada.

I would like also to dedicate this work to all those who work hard and honestly for the progress and prosperity of our society.

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DECLARATION

I declare that this thesis results entirely from my work and no portion of the work referred to in this study has been submitted in support of an application for another degree or qualification to this university or any other university or institution of learning.

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INTRODUCTION

CHAPTER ONE: INTRODUCTION

Academic staff in universities are at the centre of global changes in the nature of higher education. They create new knowledge. They find ways to teach it. They create new curricula and their work changes the institutions in which they work. The successful development of new teaching technologies and their use by students depends upon the ability and commitment of academics to use them. For these reasons the focus of this thesis is on the attitudes and motivation and understanding of academic staff in relation to new information technologies.

The special focus of this study is on academic staff in Saudi Arabian universities. Saudi Arabia is an oil-rich, Islamic society that occupies a place of global geo-political and economic importance. Saudi Arabia is a new society seeking to develop very fast to use all modern technologies and keep up with the developed societies. This is true of many societies throughout the world and indeed in the Middle East. Saudi Arabia seeks to modernize and grow, however, within the strict limits of its religious and social traditions and in acknowledgement of its position at the heart of the Islamic world.

The management of the modern state of Saudi Arabia e.g. of the security services, public administration and even the annual Hajj Pilgrimage depends upon the use of information technology and global communications. The social circumstances of Saudi Arabia, especially the country's demographic profile, increase the need to use IT in all areas of Saudi society. For example, there is a high demand for university places and a shortage of academic staff. This gap will be bridged through the use of new e-technologies in learning and training.

Like all modernizing societies Saudi Arabia must find ways to help people in employment to develop their skills further. This means that the Saudi planners have to plan carefully for work-based training and continuing professional development.

Academics have a key role to play in all this. They are, at least in principle, well placed to develop e-technologies throughout the country's educational system. They

have an important role to play in social and economic modernization through continuing professional development. They are a link between the knowledge base of Saudi society and the global research communities on which further modernization depends.

This study is an examination of how Saudi academics see their role in relation to the development and use of these new learning and training technologies.

Modern societies require continuous training for their citizens. It is an important and indispensable factor for individual social mobility and economic success. Buckley and Caple (1995: 13) have noted that, "Training has always played an important and an integral part in furthering many kinds of human learning and development. However, the fact that training can make an important, if not crucial, contribution to organizational effectiveness is only now being recognized fully."

This requirement for continuous training and development has become imperative for us in the twenty–first century. It implies that there are particular individual, group, organizational and institutional attitudes and perspectives that need to change to improve the labour force in all modern societies. Training is a dynamic, changeable and developing process. This means the content of training must vary according to the training objectives, characteristics of the trainees and their levels. Al-Hamidi who is on the academic staff of King Saud University (Saudi Arabia) pointed out that continuous training is a requirement for all sectors of the economy. Despite social and cultural differences among employees, it has a positive impact on improving the potential of all employees (1992:350).

Employees in different countries – in both the public and private sectors – usually receive training programmes to increase their performance effectiveness. This effectiveness is determined by the experiences of the employees, their knowledge of the subject-matter and the development of their skills. Training programmes often take place in traditional training classrooms.

On the other hand, in the last ten years, the Internet has appeared and has and will make a powerful impact on all levels and sectors of society. According to Knapper

and Cropley (2000:142), the growth of the Internet has been staggering. It is estimated that there are over 74 million Internet users in the United States of America. This means the number of the Internet users will increase very quickly in the next few years all over the world, as a result of communications advances and the huge service which it offers to the users. However, in consequence of the ever-increasing demand for updated skills and knowledge in different fields, it is impossible to cover them all through the methods of the traditional training system. These developments are exciting. They will bring with them new forms of flexible learning (Edwards, Nicoll and Lee, 2002) and, as Castells (2001) has explained, a much greater emphasis on teaching students how to learn. This is what Guile (2001:477) has referred to as 'reflexive learning'.

These new forms of learning are likely to bring about important changes in the contexts where they occur. Guile (2001: 473) has argued there is a choice to be made: whether to use ICT to merely *automate* learning or to use it to enrich learning in the context of new communities of practice. For Mary Thorpe (2000) this is a question about how to maintain the interactivity that is so important in all learning.

To solve this problem, Hagen (academic from Stord / Haugesund College, Norway) and Ask (academic from Norway Agder College, Norway) (1997:4, online) argue that the Internet can create many elements of a traditional in-service training classroom. These include the course syllabus – including outcomes, objectives, a schedule of topics and reading, and assignments. Beyond these features, the Internet can easily create links for e-mail, newsgroups, file transfer protocol (FTP), chat, mailing list messages, telnet and exchanges with the instructor and other class members. Seaberg, who is GIS manger, Office of the Avery County Tax Assessor, added that, almost everything that can be done in a traditional classroom could be done in the Internet classroom, and possibly more (1999:1, online).

Crenshaw (1997:1) has discussed this point noting that: "The main benefit of Internet-based training is to quickly get up to speed on new technologies without having to spend time away from the office." It is available 24 hours a day, 7 days a week, which allows in-service trainees to train at any time of the day. Al-madani, an academic in the Saudi Institute of Public Administration, pointed out in his research

(1995:190) that, "The Internet has become an essential international infrastructure that facilitates communication, information sharing, and collaboration among scientists, researchers and students. It offers a variety of services and tools that allow remote access to information and computing resources."

Interaction between society and governments has been rapidly changed by the influence of new technologies all over the world, especially in developed countries. They have changed, too, the structure of higher education. For example, Scase (1999:187) thought that if Britain wants its economy to grow it has to benefit from new technology through restructuring in the universities and higher institutions. He added that the abilities of the Internet and information technology could do that.

However, within the last few years in the Arab world the use of information technology and the personal computer records a rapid increase. According to Salem Al Shair, Director of eServices, Dubai eGovernment (2003, online), "Market research findings indicate that the growth in PC penetration and the spread of the Internet are going hand in hand in Arab countries." Interestingly, in a few Middle East countries such as the United Arab Emirates the basic services of the Internet are better than in Europe (United Arab Emirates: 2004, online).

In this respect, Nasser who is a Secretary General of IAA Jordan and Managing Director of MediaScope believed that in 2002 Saudi Arabia might be the first largest country in the Middle East in terms of the Internet market because of the income per capita (2000:online), which means Saudi Arabia is considered to be well on its way to the information society. At this moment, the Saudi government is making a great effort to be part of the global information network and tries to achieve pre-eminence among the Arab countries. However, in the kingdom, the state plays a central role to stimulate employees' training, while in western countries, private companies do it. But in the last few years, Saudi private companies have appeared. As one academic I interviewed mentioned:

> *"Yes, I think there is a chance and it (i.e. the private sector) doubles with time. The Ministry of Education adopts this concept (IT) strongly; we see this in the educational development administration and in the education administration and in the new private companies that began competing in*

> *providing the technology as a means of education. Such companies include Dawalig and Alalmiyah and the others."*

This is an example of what Castells (2001) has called education-led growth in communications technology.

With regard to the importance of the employer role in promoting the different governmental sectors services, Al-Tawail, who is the previous head of the Institute of Public Administration, mentioned that the Saudi government established it in 1961 as an autonomous corporate body. The aim of this institute is to promote the efficiency of government employees in different sectors. To accomplish this aim, it prepares government employees academically and practically. It is also considered the sole central agency in Saudi Arabia that is responsible for administrative training activity. The institute training activity consists of two types: in-service and pre-service training (1995:221).

Alhindi, who is on the academic staff of King Saud University (1993:119), added that training regulations determine the training role of the institute, and stipulate that, for the establishment of training centres for employees, the approval of the training committee should be granted. However, no government organization is allowed to organize training sessions for its employees if similar training sessions are offered by a central training organization inside Saudi Arabia. Al-humili, who is in charge of the information technology department in the Institute of Public Administration, has noted that the institute is planning to use the Internet to train Saudi women who work in different sectors and employees in remote areas who cannot come to the main Institute or one of its branches in the Saudi cities. The aim is to equip them with new knowledge and skills in their specializations. This kind of training is called distance training via the Internet (2001:29).

Internet-based training is and can be delivered in a variety of different ways and through many different organisations. The focus of this study is on the kinds of Internet-based training that might be offered by universities in Saudi Arabia. The technology is without limits in its implications for curriculum development in higher education. Western societies have shown what can be achieved. There are open

universities, distance-learning programmes at different academic levels, short course programmes without accreditation and much else besides.

Against this background of enthusiastic support for e-learning there are reasons to be cautious. Castells (2001) has noted that the Internet builds ' Cultures of Freedom' but added, too, with some Latin America Countries in mind, it creates new opportunities for repression and criminality. These possibilities, too, have to be kept in mind. Academics interested in e-learning must not ignore the wider global context in which they are developing their courses.

What limits that which could be achieved are the skills and attitudes and imagination of academic staff themselves. Because of this, the focus of this study is on the factors that are believed to promote and inhibit the growth of Internet-based distance education and training among Saudi academics.

This thesis is based on a survey of academic staff in Saudi Arabia about their attitudes to e-learning. It shows that, although the Internet and its associated technologies are relatively new in Saudi Arabia, there is strong interest among academic staff – men and women – to develop their use of this new learning technology.

As an illustration, one of the colleagues (Dean of the College of Girls) interviewed to gain feedback on the results of the research presented in this study said,

> *"The study is completely abreast with what is happening in the current times. Training is becoming an urgent need to develop and upgrade human resources in a constant manner. Also, the current technologies have enforced big challenges that highlighted the need to reconsider political, economical and social polices. To counter these challenges, the need is becoming more urgent to develop an infrastructure for education and training and modernize its methods, in order that the learner, who is surrounded by inputs of different communication media, will benefit greatly. The application of the study in the Kingdom is suitable due to its vast expanse and the concentration of training centers in big cities."*

However, this enthusiasm needs to be qualified. As another academic asked to provide feedback said:

> *"The topic of the study is one of the modern and current topics in the Kingdom and it needs additional applied researches and scientific programs that will enable us to know how to use the Internet in serving our learning (training) needs. The research recommendations and the way the results are manifested are very good, but there is merging of more than one subject between electronic learning and electronic training. I think there are differences, even if they are small, that must be taken into consideration during the discussion of the results."*

This comment reveals an important distinction in the minds of some Saudi academics i.e. that between education and training. It is an attitude that could slow up the development of e-training in the kingdom because it makes the contrast between the work of universities and business (or community-based or professional) organizations too strong. The Internet promises to overcome this traditional distinction between education and training.

In this study work-based training using distance methods of learning is seen as a sub set of the more general idea of e-learning or of networked learning. The new technology enables people who train at work to become educated and requires educators to be retrained. The data presented in this study shows that Saudi academics are interested in and willing to work with the new technology of learning.

This is good news for Saudi policy-makers. The bad news is that on the one hand, academic staff feel that both government and the managers of higher education institutions must do much more to promote e-learning if the kingdom is to benefit from it. On the other hand, the rapid change both in higher education (with the establishment of new Saudi universities and colleges both in public and private sectors) and information technology has put enormous pressure on Saudi academics to change.

As mentioned, this study is about academic attitudes to e-learning but in particular to in-service training using the Internet (e-training) and its resources in ways that supplement university-generated curricula. Therefore, this present study aims to examine the attitudes of university academic staff towards e-learning and in-service training in Saudi Arabia.

In this chapter it is necessary to present the following elements of this study:

1. The statement of the problem and the study objectives;
2. Questions and key hypotheses of the study;
3. The significance of the study and its limitations;
4. The study population, sampling and the methods employed (data collection);
5. Definition of terms.

1.1 The statement of the problem and the study objectives

1.1.1 Statement of the problem

The starting point for this study is that a new approach to training has developed for all employees in different sectors whether in or out of their jobs all over the world, which is called training via the Internet. In-service training is considered one of the important factors in improving the employees' skills, knowledge and abilities and this is central to the economic success of nations.

Economic success is not guaranteed by new technology alone. Investment in technology has to be supported by investment in skills and human resource development. Even this is not sufficient. Both students and employees have to be motivated to continue their learning. Whether they are depends upon their cultural attitudes and values. There is some anxiety in Saudi Arabia about the attitudes and commitment of some groups of workers and students who seem unwilling to place any value or further training and education. One of the academic staff interviewed was asked whether people and organizations in Saudi Arabia are developing their use of the Internet as quickly as they need to. He answered:

> *"I do believe that most employees are lazy unless they have been imposed on by the government or there are rewards or an increase in their salaries to improve their skills and knowledge. In this case they will do their best to learn and use new technology."*

In fact, the Saudi Arabian Government started to provide Internet services to Saudi society in 1997/1998. We shall show in subsequent chapters that:

1- The number of employees is very large in different sectors in Saudi Arabia (see Chapter Three);
2- Employees have fewer chances to join traditional training classes during their work time (see Chapter Seven);
3- Saudi Arabia has just recently started using the Internet services. This presents its own challenges in terms of infrastructure and training (see Chapter Six);
4- To date most people in Saudi Arabia do not have enough knowledge about Internet services (see Chapter Four);
5- Technological progress and the knowledge explosion compel the employee to participate in the training programmes to keep pace with these changes (see Chapter Seven);
6- There are no sectors in Saudi Arabia, which use in-service training via the Internet, except the health sector according to the author's knowledge (see Chapter Three);
7- In-service training via the Internet is considered less costly and saves time and money (see Chapter Five).

As stated earlier, the researcher found that there is a lack of use of the Internet in in-service training and this study will attempt to reveal the attitudes of university and college academic staff towards this new teaching technology in Saudi Arabia.

The analysis will show that the problem to be overcome i.e. of encouraging academics to develop their work in new ways, is a complex one that must be approached at different levels.

Saudi academics work in a social and cultural environment that is very different to that of their western academic counterparts. It has been suggested, for instance (Sabour, 2001), that Arab academics are more motivated by a search for status and social recognition than are their western counterparts who are more committed to their academic subjects. In addition, Arab academics are more constrained within the political orders of their society and are more limited in what they can do by political and administrative authorities than are their colleagues in the west (Sabour, 2001:83).

Such differences must be acknowledged because they help us to understand the limits or the freedom of Arab academics to innovate in the way they teach and do research. This study shows that it is important to think about academic staff in the context of the administrative and management arrangements that govern their work, including how they are rewarded. These factors, too, either encourage or inhibit curriculum development and change. Finally, we must study academics in relation to their individual careers, gender and academic expertise.

1.1.2 Study objectives

The main objective of this study is to help universities, higher education institutions and the workforce in public and private organizations in Saudi Arabia to reap the benefits from the new technology (the Internet). New methods of working and studying will help reduce costs, save time, and build better customer service in all fields of economic and public life and in learning and training processes particularly.

The specific objectives of this study are as follows:

1- To examine the extent to which academic staff in Saudi universities are familiar with using the Internet in general and understand its implications for instruction particularly;
2- To identify any patterns in the characteristics of academic staff that might influence their attitudes toward Internet-based training;
3- To reveal the attitudes of academic staff in universities towards in-service training via the Internet;
4- To identify the problems that might face academic staff when they plan to integrate the Internet into their teaching.
5- To seek faculty members' perceptions of ways in which their universities and colleges could enhance the readiness of their institutions for Internet-based learning and training.
6- To determine if there are differences between the attitudes of university academic staff toward in-service training via the Internet with reference to the years of experience, specialization, academic rank, age and gender.

7- To draw conclusions related to academic staff attitudes on adoption of Internet-based training.
8- To suggest recommendations and future research regarding Internet-based training.
9- To identify ways to encourage university academic staff to participate in, carry out or adopt Internet-based training courses.

The aims of this study are exploratory. There are few studies of academics in Saudi Arabia and little is known about how this group within the society uses information technology. There are studies of Saudi academics from which we learn something about their social attitudes (Albawardi, (1988), Almunahi, (1983)). There is little, however, about their views on information technology and its possibilities for this country. The studies that do exist (Abahussain, (1998), Al-Zumaia, (2001)) note positive attitudes towards new technologies. But this present study is slightly different because it is focuses on the attitudes of academic staff toward e-learning and in-service training.

On the basis of this study, it may be possible to develop proposals that will help Saudi universities develop their profiles in the field of e-learning (training). In recent western discussions about promoting e-learning attention has been given to the need to develop 'communities of practice' that enable academics to work together across boundaries of subject, status and institutions (Cornford and Pollock, 2003 and Thorpe, 2002). This study examines in part how likely it is that Saudi academics can work collaboratively in this way.

In the first instance, however, it is important to understand something of the lifeworld (Williamson, 1998) of academics and to understand how the circumstances of their work shape and limit their perceptions of their role. The definition of lifeworld offered by Williamson includes 'the tacit assumptions, attitudes, expectations and future hopes woven into the patterns of everyday understanding and awareness' (1998: 63).

1.2 Questions and key hypotheses of the study

1.2.1 Study questions

This study will seek to answer many questions. Its structure is as follows:

Chapter Three addresses the following question:

1. What do the academic staff consider are the positive and negative consequences of information technology on Saudi society in general and in higher education particularly?

In Chapter Four the following questions are discussed:

2. How aware are academic staff of the Internet and what is their competency in the use of it?
3. Does training of university faculty staff positively improve and develop their attitudes toward information technology?
4. To what extent is there enthusiasm among the Saudi academic staff to integrate e-learning into their teaching?
5. Do academic staff feel anxious about using the Internet to help them develop e-learning?
6. How confident are academics about incorporating e-learning into their teaching?

Chapter Five explores the following questions:

7. How do Saudi academics perceive the advantages and disadvantages of e-learning in in-service training?
8. How do the academic staff perceive the usefulness of e-learning tools in learning and training?
9. Are there any insurmountable gender issues in using the Internet to train the employees in Saudi Arabia?

Chapter Six addresses the following question:

10. What are the main difficulties and obstacles in using and integrating the Internet into the academic teaching in Saudi Arabia?

In Chapter Seven the focus shifts to the following questions:

11. What are the Saudi academic staffs' expectations from using the Internet in higher education?

12. What are the needs of the academic staff in terms of curricula change and how can they be best helped to develop their work in this field?
13. Will cooperation between Saudi universities produce good quality Internet training courses? What would promote and what would inhibit such co-operation?
14. To what extent does integrating the Internet into training processes affect the productivity of the academic staff and trainees?

There are no published studies in Saudi Arabia that provide answers to these questions. Among academics these issues are discussed and it is not too difficult to characterise the kinds of opinions that are expressed among them. These range from great enthusiasm for the new e-learning tools to real fears that this new technology will undermine higher education in the kingdom and perhaps threaten, too, the country's social and moral fabric. In the course of the interviews carried out as part of this research, this wide range of views emerged clearly. For example, one of the medical doctors is optimistic about the future of higher education in Saudi Arabia. He said:

> *"I think this will happen in 2005 because most of our teaching took place through the Internet. A conference took place in King Faisal Specialist Hospital, which used the new technology. As regards learning and research, we connected with lectures in London and the USA. Their presentations came via satellite during the conference. Discussion of these presentations happened in the same way. I think this approach is an improvement. On the other hand, we cannot benefit from this fully or in the right way yet. I hope in the future we will be able to."*

Another took a very different view:

> *"Till now we are still not clear about this issue, and all we have achieved are individual initiatives. There is no institutional work. There have been some initiatives but these have not been interlinked or integrated. Those related to the Ministry of Education are different from those of higher education; Imam University has no link with King Saud University, or the Petroleum and Mineral University, meaning there is no exchange of experience and that is unfortunately the situation."*

It is not enough, however, to describe such views. They have to be explained. This study attempts to do that by relating attitudes to e-learning (training) to a range of

other variables that may explain the differences that exist among academics in Saudi Arabia.

1.2.2 Study hypotheses

Although the approach of this study is broad and seeks to relate attitudinal data to the wider context in which academics work, the data analysis that is a key element of this study is based on a number of hypotheses. These are as follows:

1- There will be no significant differences between the attitudes of university academic staff toward e-learning and in-service training according to gender.

Saudi Arabia is commonly perceived from abroad as a society organized to separate completely the lives of men and women. Saudi social structure is, of course, very different to that of the developed societies of the west in relation to gender. As will be seen in (Chapter Five) however, female Saudi academic staff are as enthusiastic about information technology as male academics and are widely perceived by both male academics and their own female colleagues to be in a position to benefit from the new technology.
(Data collected to provide answers to this hypothesis is presented and interpreted in **Chapter Five**).

2- There will be no significant differences between the attitudes of university academic staff toward e-learning and in-service training according to age.

The study in fact shows that young academic staff are more enthusiastic about using new technology in teaching and deal with it better than their older colleagues.
(Data collected to provide answers to this hypothesis is presented and interpreted in **Chapter Five**).

3- There will be no significant differences between the attitudes of university academic staff toward e-learning and in-service training according to area of specialization (art/ science).

The study shows that in general science staff (in this study this term covers medicine, engineering, natural and biological sciences) tend to be more enthusiastic about information technology and e-learning than their arts colleagues. This reflects the realities of their work within their subject fields that often demands high-level computing skills. But arts staff, particularly younger ones (irrespective of gender), are also keen to develop their work using e-technologies.

(Data collected to provide answers to this hypothesis is presented and interpreted in **Chapter Five**).

4- There will be no significant differences between the attitudes of university academic staff toward e-learning and in-service training according to academic position.

The findings of this study are that there are no significant differences between the attitudes of university academic staff toward e-learning in in-service training according to academic position. This reflects the demographic profile of academic staff in Saudi Arabia. Because Saudi universities are young institutions there are proportionately fewer older professors. Many older professors have been imported from other Arab countries and are often not as familiar with new learning technologies than their younger Saudi colleagues, especially those educated abroad.

(Data collected to provide answers to this hypothesis is presented and interpreted in **Chapter Six**).

5- There will be no significant differences between the attitudes of university academic staff toward e-learning and in-service training according to years of experience.

As explained already, attitudes to information technology and e-learning are related to the academics' experience of teaching and using these new technologies. It is no paradox to point out that younger academics have had more opportunities to use the new technology than older ones. Computers were essential parts of their professional training. However, academic staff with more

years of teaching experience felt strongly that higher education and the new technology in Saudi Arabia would face a lot of difficulties in the future.
(Data collected to provide answers to this hypothesis is presented and interpreted in **Chapter Six**).

1.3 The significance of the study and its limitations

1.3.1 Significance of the study

Training using the resources of e-learning is still a new domain in Saudi Arabia. There are no empirical studies in the kingdom that examine this important field of practice. Clearly, people at work in Saudi Arabia (both in the large public sector and private sectors of the economy) undertake further training in their areas of specialization and competence. Some of that is formal and planned. Much is informal. The overall picture of how much training takes place, who receives it and how good and relevant it is, is not clear.

Similarly, how much of this training is and could be delivered using the tools of e-learning is also not known. If international experiences matter, this will be an important area for development in the kingdom.

This study, therefore, will contribute in the following ways:

1- It seeks to determine the attitudes of the university academic staff toward in-service training using e-learning methods and the results will reveal information regarding this kind of training. The study does not seek to measure the extent of it. The main aim is to understand the attitudes towards such training of an important group in the society who may in future have a key role to play in delivering it.
2- It will contribute to provide the Institute of Public Administration – the key training providers in Saudi Arabia – and private institutions with new ideas and suggestions on the advantages of e-learning methods to encourage these institutions to adopt training programmes and methods that exploit the new technology.

3- It is expected that this study will provide useful data to the policy makers in higher education and economic development. In particular, it will clarify many aspects of the management of change in Saudi organizations.

   As will be seen, the development of e-learning in the fields of higher education and work-based training, depends as much on helping people change their attitudes and approaches to learning (for themselves and their organizations) as it does on the availability of new technologies. If training and development in the organizations are not well managed, i.e. well supported, planned and evaluated, then no amount of investment in hardware will help them meet the new challenges of training and of keeping up to date.

4- The conclusion of this study is expected to help and develop employee training and improve their productivity.

As will seen, however, e-learning, at least in principle, has major implications for people – especially young people and women – who are not yet in employment but who could be helped, through distance-learning to acquire qualifications, skills and opportunities to be employed. Saudi Arabia has a unique labour market (see Chapter Three) that at the moment requires high levels of foreign labour. The government's policy is one of "Saudization" of the labour market and this demands higher levels of education and training for Saudi nationals.

1.3.2 Limitations of the study

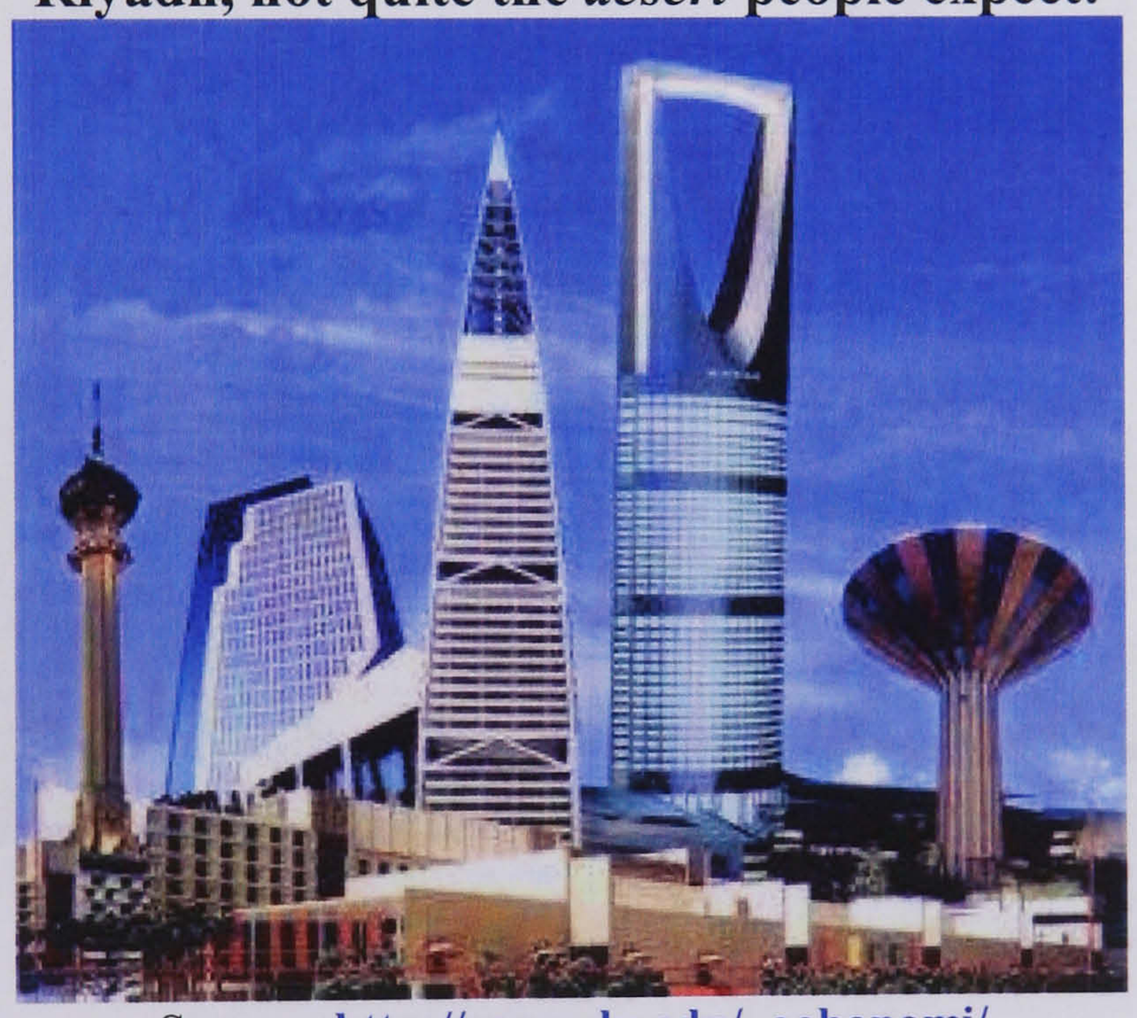
1- This study is limited in its focus to the subject of the attitudes of academic staff in universities and colleges who have PhD degrees. Employees in public sector who are to be trained need and expect experienced lecturers with higher degrees. It is for this reason that the samples were from colleagues with the PhD degree. Fry et al (2000:391) define university academic staff as the people who have many responsibilities in higher education – in teaching, learning and communicating the subject; in discipline –specific research/ scholarship, academic management and the provision of other services.

Though a relatively small group in Saudi society, these people are important to the future development of higher education in the kingdom. Their managers and leaders have to find the most appropriate ways to encourage them to develop their work in ways that will exploit new learning technologies to the full. If this cannot be done well, the whole society will be the poorer.

2- This study is limited to academic university and college staff in Riyadh city universities. The focus on Riyadh can be justified for two main reasons. The first relates to research time and resources. Both were limited and this justifies limiting the scope of the enquiry to make it manageable.

Figure 1.1: Riyadh City

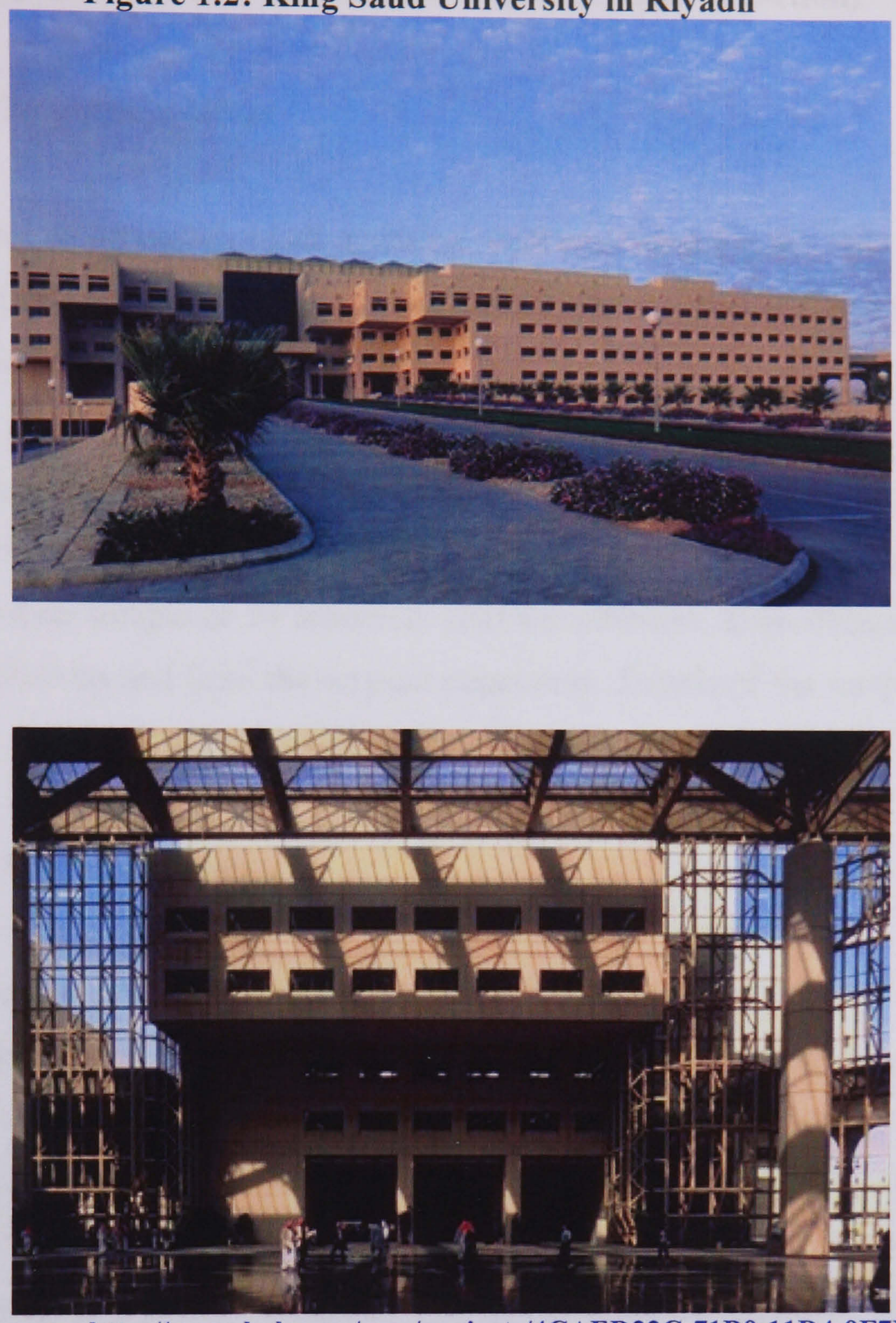
Riyadh, not quite the *desert* people expect!



Source: http://www.du.edu/~aabanomi/

Secondly, Riyadh is the capital city; the centre from which resources are distributed and policy is formulated. The universities and colleges in Riyadh are the most important in the country and what takes place within them shapes what happens elsewhere.

Figure 1.2: King Saud University in Riyadh



Source: http://www.hok.com/new/projects/4CAED33C-71B9-11D4-9F7F-009027887D89/King_Saud_University.htm?sort=Time

2- This study is limited to random samples from academic staff in the universities and colleges. As will be seen in Chapter Two (Methodology Chapter), this is not an insurmountable problem. Questionnaire data has been supplemented with in-depth interview data, a number of policy documents and reports and feed-back on my interpretations from questionnaires, respondents, interviewees and some senior academic managers. In this way the study offers an in-depth account of the attitudes of those it studies.

1.4 The study population and the methods employed (data collection)

1.4.1 Study population

The study population consists of all academic staff who have got the PhD degree in Saudi universities, colleges and in the Institute of Public Administration in Riyadh city, the number of which is 3200.

After identifying the size of the study population, the researcher selected a random sample of 320 academic staff from different universities, colleges and institutions, and also a random sample of 24 academic staff for interview from different higher education institutions and from the original population. Details of the sample are set out in Chapter Two (Methodology Chapter).

1.4.2 Data collection

The study has used a questionnaire, which is the most common tool used in social studies in Saudi Arabia. The questionnaire used is discussed in more detail in both Chapter Two and appendix A. Questionnaire-based surveys are a cost effective way to collect data and to allow the researcher to ask many different kinds of questions (Buckley and Caple, 1995:265). Given that empirical social research in Saudi Arabia is still an undeveloped field of practice, the results of questionnaire-based research are highly valued in the academic and policy-making community. In an area of research such as this where there are very few empirical studies, basic data collected through questionnaires is especially valuable.

Buckley and Caple (1995: 263) define an interview as "A face-to-face conversation structured around a checklist of prepared questions." The researcher, therefore, conducted interviews with academic staff who work in the King Saud University, Imam Muhammad bin Saud University, Girls Colleges and the Institute of Public Administration to examine their opinions about e-learning in in-service training. These interviews were transcribed and analyzed and provided rich information about the attitudes of the academics studied.

1.5 Definition of terms

A. E-learning

Wentling, who is a professor of Information Science in the Graduate School of Library and Information Science and Senior Research Scientist in the National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign, defined e-learning as "The acquisition and use of knowledge distributed and facilitated primarily by electronic means. This form of learning currently depends on networks and computers but will likely evolve into systems consisting of a variety of channels (e.g., wireless, satellite), and technologies (e.g., cellular phones, PDA's) as they are developed and adopted." (Wentling et al, 2000).

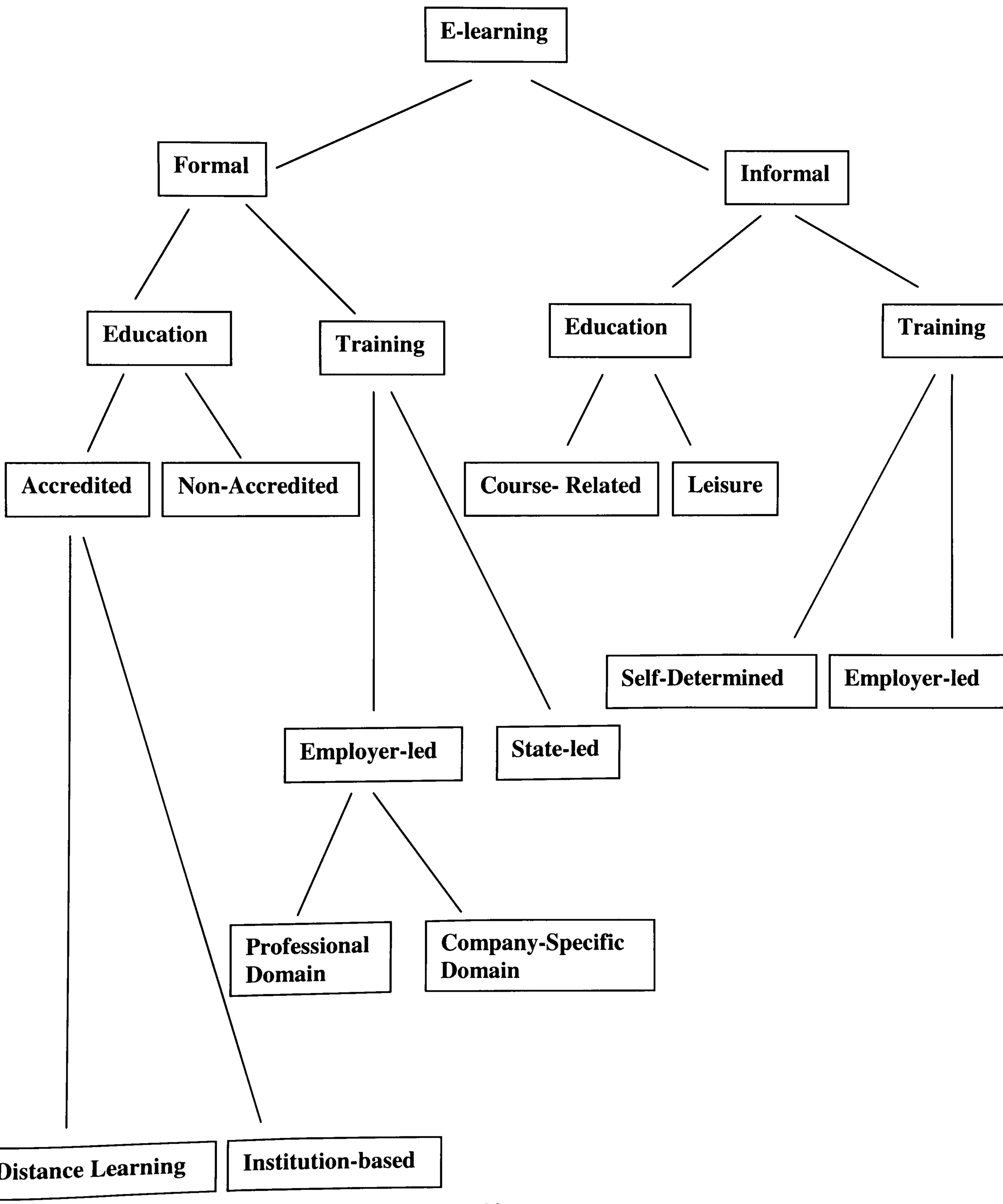
Therefore, new information technology has created a whole new language of education and training. Before computers – particularly before personal computers (PCs) connected through the Internet – the language of education and training described forms of learning that involved teachers, students, courses and curricula that came together in particular places (colleges), at particular times set by a timetable or study programme, to work together for a set number of years organised into academic terms.

All this has changed. Learning has been set free of the constraints of particular places (colleges), times (study programmes) and teachers and takes place in all domains of human activity – especially the world of work. The personal computer and the Internet have added a whole new dimension to ideas about distance learning and training.These changes are part of much more fundamental changes in the social structures of modern societies e.g. the democratization of higher education and the new economic imperatives of the global economy. They bring with them new ideas about learning and they challenge the values that have been part of the idea of education (Blake, Smith, Standish, 1998).

E-learning covers a whole family of ideas and practices in the domains of higher education and in-service training. Different terms are used to describe the forms of learning the new technology makes possible. Some writers talk about networked

learning (Brophy, 2004); others use the term 'distributed learning'. E-learning is a generic term that covers these but care is needed to be clear about the specific kinds of learning it refers to. They can be pictured as follows:

Figure 1.3: Conceptual Map of E-learning



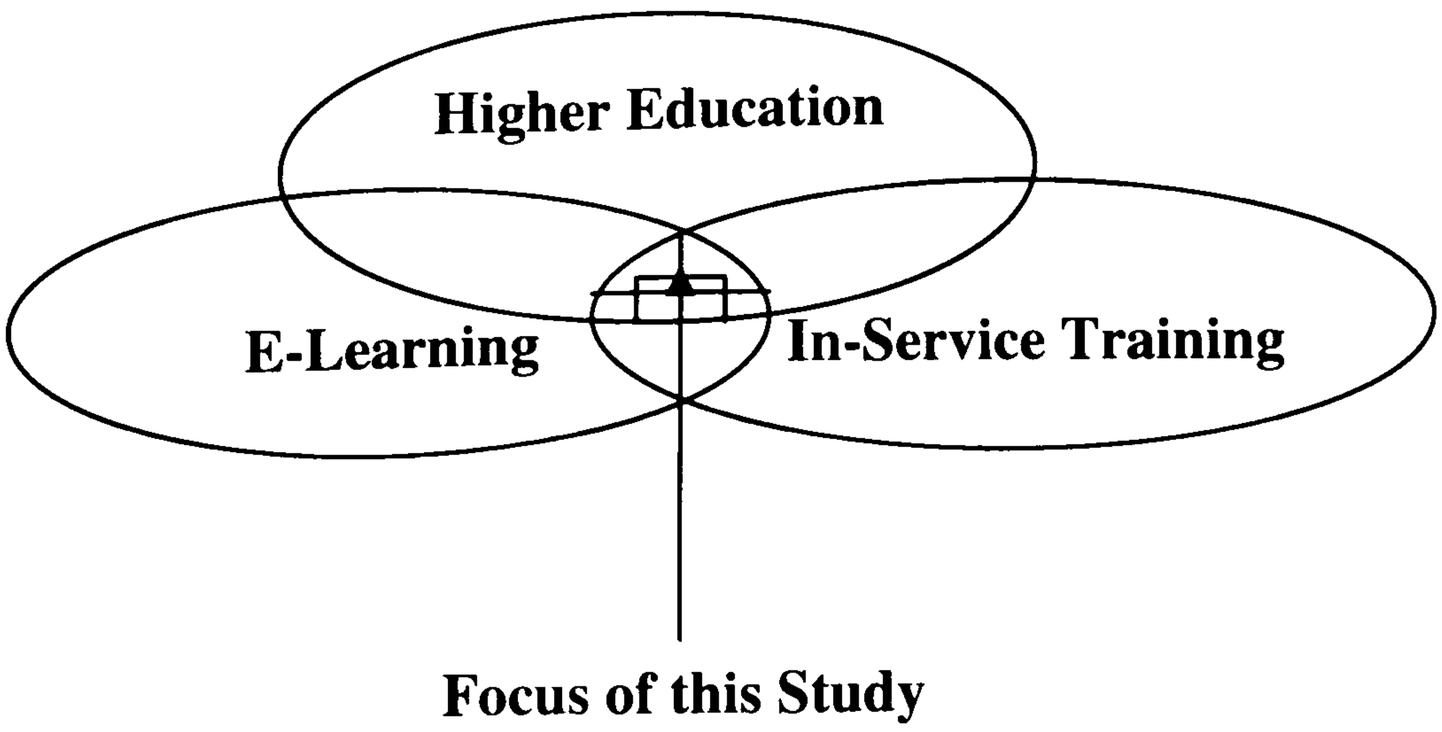
This diagram is not a complete description of the domain of e-learning. It builds upon two distinctions: courses that are formal or informal, accredited or non-accredited. Other criteria of classification could be used, for example, whether courses are open or have restricted access, whether they are cheap or expensive either to study or to provide. Work is needed using such distinctions to generate better typologies of the different forms e-learning can take. For the moment, it matters only to note that in this study the focus is on formal higher education and post-qualification training delivered both at a distance and within institutions using the technological tools of e-learning.

Put differently, this study is **not** concerned with the attitudes of academics to distance learning in general or the role of computers in research. It is **not** concerned with initial education and training or how computers might help in basic skills training or be used by people in their leisure.

The focus is much more specific on the attitudes of academic staff in Saudi universities as these relate to the kind of education and in-service training that they believe are needed to contribute to the economic and social development of their country.

The focus is narrow but, as will be seen, the analysis of the attitudes and viewpoints of academics has to place them in the wider context of their careers. In particular, they must be seen against the background of how universities in Saudi Arabia are managed.

Figure 1.4: Focus of the Study



This simple diagram locates the specific focus of this study i.e. the relationship or point of intersection between higher education, training and the tools of e-learning. This clarifies that the study is focusing on one aspect of university life and curriculum and on one feature of work-based training and the attitudes associated with them.

B- Attitude

Allport (1935: 789 cited in Abu-Dalbouh 1997:24-26) identifies the term attitude, as: "A mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related."

Thomas (1971:18) defines attitude in a similar manner as, "An attitude is a disposition to act which is built up by the integration of numerous specific responses of a similar type, but which exists as a general neural set and when activated by a specific stimulus results in behavior that is more obviously a function of the disposition than of the activating stimulus."

Building on these definitions, attitudes in this research are taken to be dispositions to **think** about and to **feel** something about a particular object – in this case the rather complex and abstract object of e-learning and information technology – and to **act** in particular ways. In relation to the object, some people will be very positive in their attitudes toward e-learning and will be willing to act i.e. to work with the new technology in interesting ways. Those with negative attitudes will be unwilling to work with the new technologies.

Attitudes cannot, however, be seen purely as aspects of the make-up of individual personalities. Attitudes researchers always place the individual as part of a group and indeed, of a culture (Pennington, 1992). And attitudes are not perceived as something fixed, but as dispositions that change as circumstances change.

In this study, therefore, attitudes are analyzed against the background of the structure of Saudi society, change in higher education and the settings in which respondents themselves work and live.

C- Training

Buckley and Caple (1995:13) define training as, "A planned and systematic effort to modify or develop knowledge, skill, attitude through learning experience, to achieve effective performance in an activity or range of activities. Its purpose, in the work situation, is to enable an individual to acquire abilities in order that he or she can perform adequately a given task or job."

Training in this research means the organized and planned process, which in the public sector in Saudi Arabia is the responsibility of the Institute of Public Administration. Its role is to help employees fulfill their assignments and to obtain more from their cultural experiences which can raise the professional level and increase the energy and productivity of employees. The same needs have to be met in private sector organizations.

The emphasis in this study is on training that is planned and that involves programmes of teaching and learning that involve e-learning tools. This is **not** to devalue the whole field of informal learning (Garrick, 1998). People learn all the time both in work and in their ordinary lives. The focus of this study, however, is on those forms of learning that can be facilitated using the tools of e-learning and that involve university – based programmes of study, some of which will be accredited and some not.

These definitions indicate the scope of this study. It is focused on the attitudes of Saudi academic staff towards training programmes that employ the methods of e-learning. Academics in universities will play an increasingly important role in promoting the development of e-learning and training in the kingdom. This study seeks to examine their attitudes towards these new modes of teaching and learning.

CHAPTER TWO

RESEARCH METHODOLOGY

CHAPTER TWO: RESEARCH METHODOLOGY

Wellington (1996:16) has defined methodology as a kind of "Activity or business of choosing, reflecting upon, evaluating and justifying the methods you use." The main objective of this chapter is to describe and justify the methods of collecting information used in this research.

2.1 The objectives of the study

As mentioned in (Chapter One), the main objective of this study is to help universities, higher education institutions and the workforce in public and private organizations in Saudi Arabia to reap the benefits from the new technology of e-learning (the Internet); to reduce costs, save time, and provide better customer service in all fields in general and in learning and training processes particularly.

The specific objectives, as already explained, were to understand and explain the attitudes of Saudi academics towards the new learning technologies. Their role in developing the use of e-learning tools in higher education and professional development is an important one.

2.2 Methodology and method

The methods in this study include:

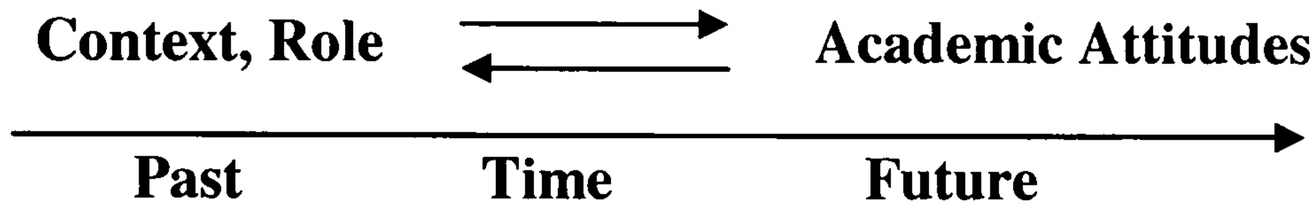
- Questionnaire;
- Interviews;
- Feed-back discussions;
- Documentary research;
- Literature review.

The methodology of this study, i.e. the justification of the methods used, has several elements. In essence, the approach combines quantitative data analysis with qualitative interpretation of interviews, written materials and conversations. The data, observations and commentary about the topic under review, i.e. academic attitudes towards e-learning, is interpreted further and hopefully more deeply, by placing it against the historical and cultural characteristics of Saudi society and the policies of its government for socio-economic development and higher education.

- The quantitative element of the research was based on data collected about attitudes using a questionnaire. This is a well known and respected instrument of research in Saudi Arabia and a cost-effective way to collect information.
- The qualitative element was the process of interpretation of interview material. The aim was to interpret the meaning of what interviewees said. This was done by relating interview responses to aspects of the social and academic background (including: gender, subject, status and years of experience) of interviewees.

The task can be viewed as follows:

Figure 2.1: Attitudes and Social Change



The challenge is to understand how the attitudes of academics are related to their *work situation*. In Saudi Arabia, as will be seen, there are many factors to consider in describing the work situation of academics. These include the values of an Islamic society, the speed of change of its development and the pressure of demand for university places due to the young age structure of the population. In different ways these shape the work conditions and experience of academics. They have to be carefully described. It cannot be just assumed that the conclusions of studies about academic life in other countries in the world will translate across to explain aspects of Saudi academic life. It is very important, therefore, to provide a full account of relevant aspects of Saudi social structure and social change to appreciate properly what academics say about their work. To explain the context in which academics live and work we have to consider the following:

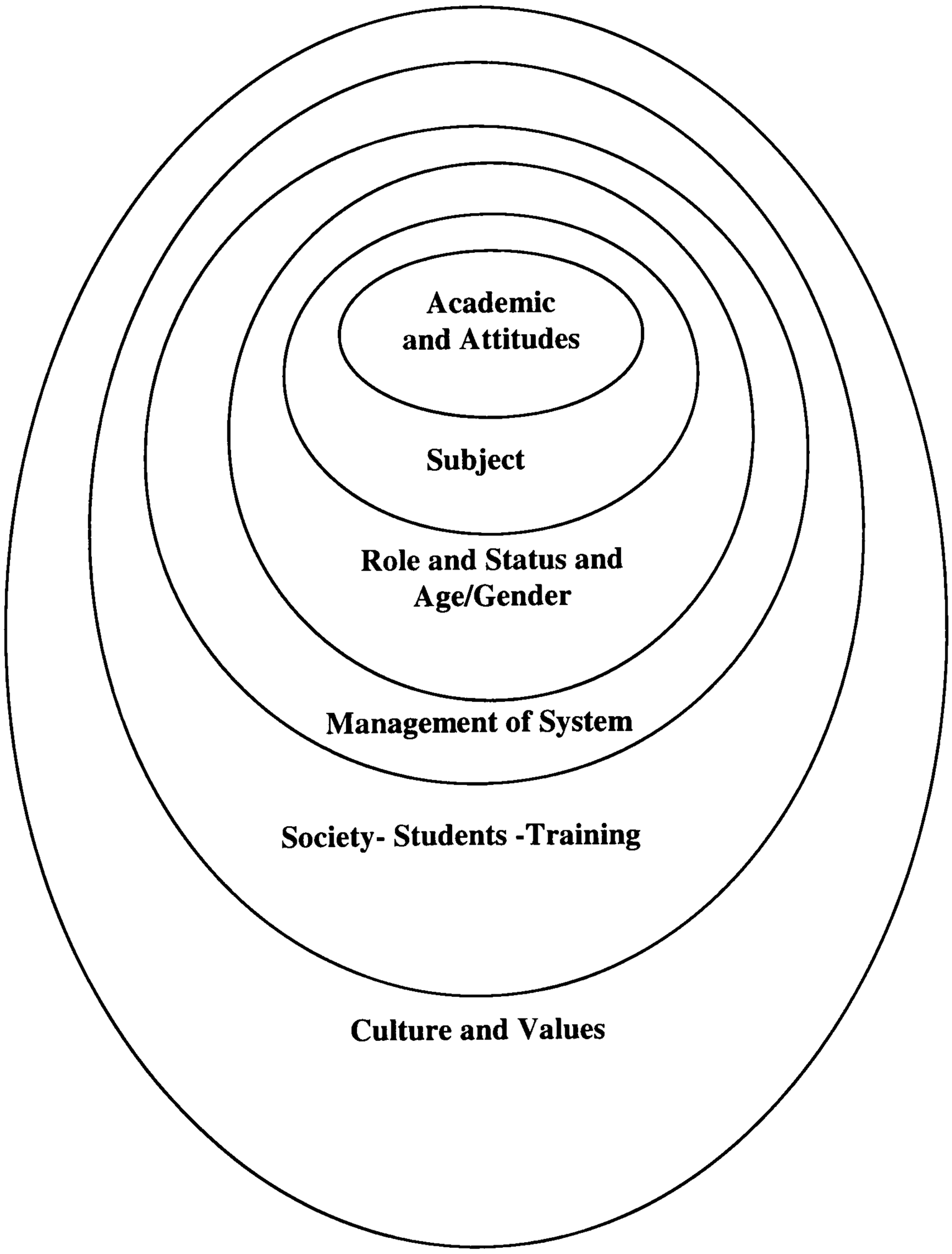
1. Saudi universities: there is great pressure on places given the youthful age structure of the population; there are too many students and staff shortages. Traditional curricula and management styles predominate;
2. Saudi Arabian society: Saudi Arabia is a relatively young nation. It is a resource- rich, conservative society with a foreign labour force of six million and policies to replace these with Saudi nationals under a programme of "Saudization";

3. Labour markets and education and training systems.

These themes define different aspects of the lifeworlds of academics and must be described in detail if their attitudes are to be explained. We have to consider how academics interpret the changes going on in their society. It is particularly important to ask questions about their views on the future, i.e. on the direction of change taking place in their country. These are the issues around which their attitudes develop.

It is not unreasonable to expect that academic attitudes vary according to such factors as age, academic specialisation and gender. Also, attitudes to the development of new forms of teaching and learning are likely to be related to the specific circumstances of their work: the resources available to them, the support they have from managers and the ways in which public policies affect their institutions. These features of the work situation can be represented as follows:

Figure 2.2: Attitudes in Context



This broad framework has shaped the way in which data was collected for this study. It helped in the choice of questions both for the questionnaire and the interview schedule. It helped, too, in the way this data was interpreted.

Research methods must be appropriate to the methodology and both have to be reliable to persuade readers and users of the research of its validity. It is, therefore, important to try and ensure that:

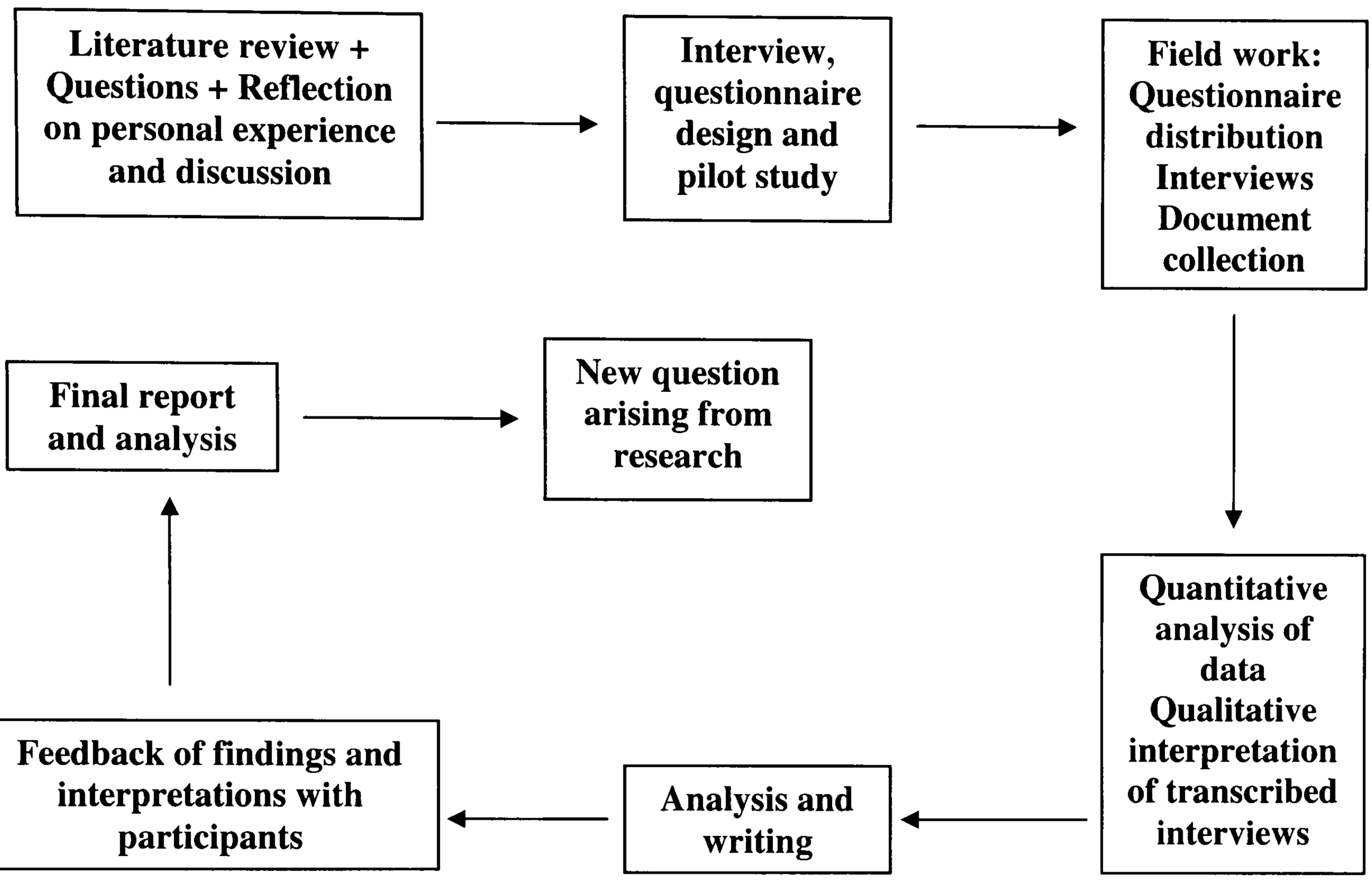
1. The research used appropriate methods to collect information;
2. The results are triangulated against other data;
3. The interpretation is reasonable, i.e. it links attitudes to context; it is logical, evidence-based and draws on available knowledge and experience;
4. The interpretations have been checked and discussed by those involved in the study and that they agree with its conclusion.

The process and steps involved in carrying out this research can be explained as follows:

The method has many features of what Strauss and Corbin (1997) call 'grounded theory' or what Reason and Rowan (1981) call 'joint enquiry'. In its very early stages, the main idea of the researcher was to collect all the relevant data through a questionnaire-based survey. It became clear, however, that this could only be one element of the approach – although, given Saudi society and the research styles that are known and valued by the academic community there, it is an important way to conduct research. Additional data was needed, although there are special problems to be overcome in using such qualitative methods in Saudi Arabia. For example, in general, it is not possible for male researchers to interview women. Also, people are careful about what they say to researchers in case their views will be not reported accurately.

With these things in mind, the process of the research, as it was actually carried out, can be represented as follows:

Figure 2.3: Research Process



This is a schematic representation of how the work was done. At each stage new questions emerged and the data was reviewed again to see if it helped to provide answers. This process is continuous and demands in-depth interpretation at each stage.

2.3 Structure of the research

This study was carried out using a variety of different research methods. It is often said that in the social sciences there are two different types of research: quantitative research and qualitative research (Kvale, 1996). Following the advice of Marshall and Rossman (1995: 99), this study takes the view that different research methods and approaches can actually be mutually supportive.

Quantitative data collected by questionnaire about the attitudes of academic staff was supplemented by qualitative data gained from in-depth interviews. This enabled the researcher to interpret the data analysis much more thoroughly and deeply than would have been possible on the basis of statistical analysis alone.

The analysis of qualitative data has to be a systematic process for interview-generated responses do not speak for themselves. What people say has to be understood, interpreted and explained. To do this, as already explained in the previous section, it is necessary to place interview material against the background of the contexts in which interviewees live and work.

It is for this reason that much is said in this study about the social structure – especially the educational system and the labour market – in Saudi Arabia. Saudi university staff are under real pressure from rising student numbers and from the management of their institutions to adopt new information technology into their teaching. Their attitudes, as will be seen, cannot be discussed apart from such pressures. It is vital to bring these contextual factors (with some explanation, in addition, of the historical changes that brought them about) into view.

In addition to the quantitative, survey-based data and the qualitative interview data, this study draws also upon both other academic work and public policy documents concerning e-learning. Such documentation is an important source of further information against which to triangulate the data from the primary research.

Finally, the validity of the conclusions reached in this study was checked by feeding back the results to key informants so that the results could be assessed. This took the form of circulating an interim report. Sixteen interviewees and respondents of the questionnaire and two policy-makers commented on the report. A further assessment was made through a discussion group. These discussions have reinforced the emerging conclusions of this research.

It should be noted at this point that this study has its starting point in the experience of the researcher. I work in Imam Muhammad bin Saud University as a teacher and,

prior to that, as an official in the Shura Council, servicing its members in the fields of health and social care. These experiences brought me into close contact with Saudi academic staff. As a student and postgraduate student in a Saudi Arabian university I have first-hand experience of many of the problems they face. This understanding has obviously shaped the interpretations of the data that are presented in this study. No attempt was made to make this a participant observation study, but my participation in Saudi academic life has clearly helped in my understanding of the research data. It gave me access to people who could understand the purpose of the research. It enabled me to share ideas and interpretations with them. At the same time, however, it has been useful to be away from the university in Saudi Arabia, and to think about what is happening in the country from the perspective of non-Arab writers and in the light of different discourses of higher education.

2.4 Instruments used in the current study

Two data collection instruments were used in this study. The first was a questionnaire. The questionnaire was considered the most suitable tool to collect data from the large number of the people who took part in this study.

The limitation of the time available for research was an important reason to use the questionnaire in the study. Another reason is related to a key characteristic of Saudi culture. Because Saudi women are restricted in their contact with men, the questionnaire was a convenient tool in that it could easily be distributed to female faculty members of the universities by a female relative of the researcher.

The second tool is the interview, which is often used when the target group is small. This tool enables researchers to collect in-depth data from the participants to support the data, which is gathered from questionnaires. Cohen and Manion (1985: 307) consider that the approach that is usually used in educational and social research in order to elicit data and information is the structured interview. This research is no exception.

Semi-structured interviews were also appropriate instruments in this study. Semi-structured interviews by phone were used to gain information from female academic staff, because they give interviewees the opportunity to express their feelings in depth, simultaneously remaining consistent with Islam and the nature of cultural norms governing gender relations in Saudi Arabia, which forbid males to interview females.

Generally speaking, using more than one instrument to gather data is very useful for they can complement each other.

Marshall and Rossman (1995:133) argue, "Limitations in one method can be compensated for by the strengths of a complementary one." Reichardt and Cook (1979:21) support Marshall and Rossman's view, and add that using quantitative and qualitative approaches in the study helps to reach the objectives of the research and its needs. At the same time, it will increase the validity and reliability of the study tools.

However, some writers have tried to highlight differences between the quantitative and qualitative methods. For example, Gay and Airasian (2000:9) state: " Qualitative research methods are based on different beliefs and purposes than quantitative research methods. For example, qualitative research does not accept the view of a stable, coherent, uniform world. It argues that meaning is situated in a particular perspective or contexts, there are many different meanings in the world, none of which is necessarily more valid or true than another."

Some others argue that qualitative research could provide data from people more vivid and realistic than quantitative research in terms of the depth of the information. According to Denzin and Lincoln (1994:1-17) (cited in Gall et al, 1996:28), "Qualitative research is multimethod in its focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural setting, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring them."

The researcher has selected a mix of appropriate quantitative and qualitative methods to collect data on attitudes. Ultimately, with any particular system, it depends on how it is used and the rigour with which it is employed that will determine how useful it is.

2.4.1 The questionnaire

The main purpose of the questionnaire that is used in this study is to yield reliable evidence related to its objectives. It is a scientific tool for the collection and measurement of particular kinds of data. It is not just a list of questions that have to be answered. Questions have to be carefully constructed and be relevant to the hypotheses of the study.

According to Oppenheim (1992:100), "The questionnaire has a job to do: its function is measurement. But what is it to measure? The answers to this question should be contained in the questionnaire specification. Many weeks of planning, reading, design and exploratory pilot work will be needed before any sort of specification for a questionnaire can be determined, for the specification must follow directly from the operational statement of the issues to be investigated and from the research design that has been adopted."

Slavin (1984), McKernan (1991) and Gay and Airasian (2000) suggest that, in order to build a good questionnaire for any research in educational and social fields, there are general guidelines to be followed. These principles are that questions have to be easy to understand, not too long and complex and they have to be significant or specific to the study; it is necessary to separate questions which have two parts and, in multiple choice questions, to make sure that all possibilities are mentioned.

Cohen and Manion (1989:203) discuss four types of questionnaire – the mailed questionnaire, the self-administered questionnaire, the group-administered questionnaire as well as the electronic questionnaire, that is used nowadays through the Internet in various fields of inquiry.

In this study, the researcher has adopted self-administered questionnaires and group-administered questionnaires, because the researcher wanted to ensure that all

questions were answered and to be able to assist the respondents in understanding the questions that were not clear or comprehensible to them. Moreover, the reason why the researcher did not use a mailed questionnaire was because of the possibility of delay, or damage to the questionnaire during distribution. It was also more likely that some of the questionnaires would not returned by some respondents.

Group-administered (to female academics) and self-administered (to male academics) questionnaires were distributed to respondents. They consisted of closed questions. The choice to include closed questions was made, since they are easier and quicker to answer; they require no writing, and quantification is straightforward, facilitating analysis of data (Al-Sef, 1989:354).

Gay and Airasian (2000), Oppenheim (1992) and Cohen, et al (2001) stated that the most important advantages of the questionnaire are as follow:

1. It is not difficult to allocate and complete;
2. It is possible to distribute to many different samples simultaneously;
3. Responses are easily to count and the figures are easy to put into a table;
4. Reply to the questionnaire through writing gives the respondents a means of expression without shame;
5. Questionnaires are able to reach respondents in remote or distant areas.

On the other hand, McKernan (1991) and Gay and Airasian (2000) questionnaire has many disadvantages such as:

1. Sometimes data of questionnaires need more time to analysis especially if they include open-ended questions;
2. In some instances respondents do not complete their answers and sometimes provide dishonest answers;
3. Entering the sample's replies into a software computer in order to analysis them might cost a lot of money.

A further problem is that the data that can be collected by questionnaire is necessarily a simplified description of complex realities. In this research the limitations of this data are overcome to some degree by the inclusion of the results of interviews that enabled the researcher to discuss key problems in greater depth.

Prior to the main fieldwork application and as a first step in the design of the methodology instrument (questionnaire) applied in this study, the researcher had preliminary contact with people belonging to the different groups, such as male academic staff in King Saudi University and female academic staff in Imam Muhammad bin Saud University. These academic staff were asked for their views about integrating the Internet into their instruction and the feasibility of using the Internet to train employees at work. On the basis of their different views some general questions were formulated into the questionnaire to complement other questions that had been designed to explore themes drawn from the wider academic literature in this field.

In order to develop the questionnaire for this study, it was necessary to read previous studies to see if a suitable tool already existed, which had previously been tested in a similar context to the current study. Unfortunately, no suitable tool for the sample was found. As a result of that the researcher needed to design appropriate questions for this study. The researcher conducted a review of other literature related to questionnaire design, such as Christensen (1998), Hollands (2000) and Pickerill (1999). This helped the researcher to construct a suitable questionnaire (see Appendix A).

The questions have been designed to invite responses along a five-point scale (strongly agree, agree, undecided, disagree, and strongly disagree). The reason why the researcher used a five-point scale for the academic staff, is that it gives the respondents more freedom of choice without any pressure. Besides, it is commonly used in educational and social fields (Robson, 1996).

A covering letter was attached, which clarified the objective of the study and would give respondents the confidence and security to reply to the questions honestly. The advice of Cohen et al (2001:97) was followed: "The purpose of the covering letter is to indicate the aim of the survey, to convey to respondents its importance, to assure them of confidentiality, and to encourage their replies."

2.4.2 Interview

As mentioned earlier, the researcher planned to use the interview as an instrument to support the questionnaire. A semi-structured interview was chosen for this study on the grounds that it would give academic staff more freedom and flexibility to talk without pushing them to say what the researcher would like to hear (see Appendix B).

Buckley and Caple (1995:263) define an interview as "A face-to-face conversation structured around a checklist of prepared questions (usually a mixture of open-ended, problem solving and closed questions, i.e. Yes / No or rated answer questions) that can take place in or away from the workplace."

In another definition offered by Borg (1981:86), the interview is "A form of measurement that is very common in descriptive research, such as survey, but can also be used to collect a variety of educational data in other types of research. This method is unique in that it involves the collection of data through direct verbal interaction between individuals."

It is worth here to state the main advantages and disadvantages of the Interview in general. Many researchers have mentioned to the advantages and disadvantages such as Gay and Airasian (2000), Cohen et al (2001) and Drever (1995:1). Among the most important advantages are as follow:

1. The interview technique can provide the researchers data and information in more detail and in more depth, which means it, provides for high quality data.
2. It can also give a high ratio of response.
3. The interviewer can notice the interviewees' expressions and their behavior during the face-to-face interview.
4. It is a very flexible instrument. There can be follow-up questions and the interviewee can clarify in more detail any answers given.

With regard to the disadvantages of the Interview, Gay and Airasian (2000), Cohen et al (2001) and Drever (1995:5) considered that the main disadvantages are as follow:

1. Sometimes the interview might be affected by the interviewer's bias and subjectivity.
2. It needs more time and it costs too much money.
3. There is no chance to consult records. Research that reports interview data has, therefore, to be trusted. Two reasons for having confidence in this research are: a) the academics interviewed can be known and spoken to and b) people involved in the research were given a chance to comment on its findings.

Moreover, Gall et al (1996:306) state that it is very important, when the researcher intends to use the interview as an instrument in his/ her research, to define the purpose of his/her research. Therefore, the nature of the interview and the questions asked are going to be determined by the research objectives.

The interviews were conducted with twenty-four academic staff. They covered different subjects and fields and were based on some questions that have been used in the questionnaire.

The interviews conducted with academic staff covered the following issues:

1- Background information;
2- Internet and higher education in general;
3- Use of information technology training;
4- Personal feelings;
5- Trainees and curriculum.

Moreover, other questions that were used emerged from the responses of interviewees during the interview. Later, as will be explained shortly, there was another cycle of interviews in which those who had given information were asked again about the researcher's interpretation of the data they had given him. This provided a further check on the validity of the interpretation.

2.5 Study population

There were two principal groups of subjects interviewed for this research. The first was the academic staff of all universities, colleges, and higher institutions in Riyadh city. This group consisted of all Saudi faculty members of the King Saud University, the Imam Muhammad Bin Saud Islamic University, the Colleges of General Presidency for Female Education in Riyadh, and the Institute of Public Administration in Riyadh city (3200 academic staff). These faculty members are divided as follow:

Table 2.1: Academic Staff in Higher Institutions in Riyadh

Institution	Male	Female	Art	Science
King Saud University	1094	365	618	841
Imam Muhammad Bin Saud Islamic University	685	35	720	-
Colleges of General Presidency for Female Education	2	702	570	134
Institute of Public Administration	307	10	-	-
Total	2088	1112		

Source: Ministry of Planning, 1999:71-98.

The second group consisted of 24 faculty members selected from these universities, colleges and institutions. The researcher, using a semi-structured interview approach, conducted personal interviews with members of this group. If some of the interviewees were too busy to be interviewed, or were women whom the researcher could not interview on a face-to-face basis, the interview was conducted by phone.

The reasons behind the choice of institutions were that they are the most privileged organizations in terms of financial support and are the oldest in both the city and kingdom. In addition, they have the newest and the best facilities and equipment, such as computers, hardware and software and all of them have access to the Internet. In this respect, these are the most important academic institutions in the country. They have a special place in the intellectual life of the country and their work is vital to the future development of the country.

2.6 Sampling

In this study, the researcher used two kinds of sampling for the questionnaire and the interview.

An important point is that the sampling has to accurately represent the study population. In quantitative research (using the questionnaire), sampling refers to the process of selecting a sample from a large group of people. There are many different methods through which to draw samples from the target population. In the current research, the researcher believed that the appropriate type for this study was random quota sampling, because it can deal with the complexity of the sample groups involved in this research. The quota sample of this study was built as follows: higher education divides into King Saud University, the Imam Muhammad Bin Saud Islamic University, the Colleges of General Presidency for Female Education, and the Institute of Public Administration. Every one of these higher institutions divides into colleges of science and colleges of arts (N.B. there is no humanities division in Saudi universities). Every college divides to male academic staff and female academics. Academics were divided into old and young academics. There could in principle be further sub-divisions but too many of these would make the analysis of the results unmanageable.

Quota sampling is non-probability sampling. As Cohen and Manion (1994:89) explain: "Quota sampling attempts to obtain representatives of the various elements of the total population in the proportions in which they occur there."

This kind of the sample involves knowing the characteristics of the study population in the beginning in order to enable the researcher to classify the population into groups or units such as male and female. After that the researcher takes a sample from all units in order to collect information from individuals.

The main advantage of this type of sampling is that the information sought does not need the lists of the names or databases, which provide sampling frames. Because of this it does not use the principle of random sampling. An important advantage is that it is easy to use and apply. At the same time, it is not costly (Umar 1983:137).

In the current study, it was necessary to define the characteristics of the entire population of academic staff. The whole population is 3200 academic staff (Ministry of Planning, 1999: 71-98).

For the questionnaire, the sample was selected through quota sampling from the different universities and colleges of about 10% of academic staff from the original population. Gay and Airasian (2000) suggest that a sample of ten percent of the whole population is the minimum required for collecting data whether the method is quantitative or qualitative. That meant the sample of the study became 320 academic staff.

With regard to the interview sample in this study, the researcher planned to interview 24 academic staff from different departments in the selected universities, colleges and institutions. These people can play a big role in the planning and adoption of courses based on e-learning in the future. It is necessary, therefore, and of great importance, to know their attitudes, viewpoints and suggestions toward using and integrating the Internet into the instruction processes, and in order to facilitate learning and training for work-based learners and employees via the new technology.

The interview sample was chosen through purposive sampling. It is very helpful for the researcher. Cohen and Manion (1994:89) state, "In purposive sampling, researchers handpick the cases to be included in the sample on the basis of their judgement of their typicality. In this way, they build up a sample that is satisfactory to their specific needs."

As mentioned earlier, the number of the interviewees was twenty-four faculty members of the universities, colleges and institutions. Sixteen of them represent cells that come from dividing the interview sample into male and female, old and young, science and art, graduate from Saudi universities and abroad. In addition, the researcher sought to get more information from eight other academic staff. A semi-structured interview schedule was used. This kind of interview provided a large

amount of data, which complemented the data from the questionnaire. The final profile of those interviewed was as follows:

Table 2.2: Purposive Sample Frame of Academic Staff (Interviewees)

Male (16)				Female (8)				24
Art (8)		Science (8)		Art (4)		Science (4)		
Young (5)	Old (3)	Young (3)	Old (5)	Young (2)	Old (2)	Young (2)	Old (2)	
Saudi university (4)	Abroad (4)	Saudi university (0)	Abroad (8)	Saudi university (2)	Abroad (2)	Saudi university (0)	Abroad (4)	

In accordance with Saudi culture, the researcher could not interview female academic staff in Saudi universities. Bulmer and Warwick (1993) acknowledge that in some countries, especially the Arab Gulf countries such as Saudi Arabia, getting access to interview females might be impossible. In order to overcome the difficulty, the telephone interview is considered to be the best instrument available. In addition, it is useful to avoid prejudice and any difficulties that might arise in the relationship between men and women.

2.7 Pilot study

This is highly recommended to make sure that the instruments are suitable for use with a specific sample and to make any necessary alterations and revisions to study tools before carrying out the main study and distributing the questionnaires to the samples. Accordingly, the main objective of the pilot study is to identify any possible difficulties and solve them immediately before embarking on the main fieldwork. Rowntree defines the pilot study as a preliminary study undertaken prior to the major task (1981:217).

Generally speaking, the advantages of a pilot study are as follows:

1- It gives the researcher more confidence in the research instruments;
2- It reduces their errors and mistakes;
3- It saves time.

Phillips et al (1994:42) have suggested "The use of a pilot study is essential, where the draft questionnaire is tested on a small group of the people, who have the same characteristics as the sample group to be used for the main study."

Pilot studies are carried out with fewer participants than would be employed in the main study. The number depends on the study itself. However, a pilot study commonly uses about twenty participants and its concern is with the questionnaire and the relevance of interview questions. It usually involves fewer subjects than the main research.

Between June and July 2002, the researcher conducted the pilot study in Saudi Arabia, to be sure about the consistency and accuracy of the questionnaire and interview questions, with a sample of individuals chosen at random from the population of the study. The reason why the random sample was used in pilot study was because the majority of the sample involved came from the Imam Muhammad Bin Saud Islamic University and all of them were male academics. This group of participants did not take part in the main study.

2.7.1 Validity of the research instruments

Valid instruments are very important factors in successful research. According to Messick (1989:13), the definition of validity is "An integrated evaluative judgment of the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of inferences and actions based on test scores or other modes of assessment."

The validity of the research methods divides into four types as follows: a) Concurrent validity, which has been defined by Slavin (1984:82) as "Correlation between some scores on a scale or scores on another scale or measure of established validity given at about the same time." b) Construct validity, which Gall et al (1996:249) define as "The extent to which a particular test can be shown to assess the construct that it purports to measure." c) Predictive validity, which Gay and Airasian (2000:165) define as a "Degree to which a test can predict how well in individual will do in a future situation." d) Content validity, which Gall et al (1996:249) define as "The degree to which the scores yielded by a test adequately represent the content, or conceptual domain, that these scores purport to measure."

In the current study, the researcher depended on content validity as a way to test the validity of the questionnaire and interview instruments of this study.

Content validity consists of several measures. First of all, the study tools have to be defined carefully. Then, experts who work in the same field and in statistical analysis should examine these instruments. Finally, the research tools used have to be appropriate to the concepts that they are meant to measure (Gay and Airasian, 2000: 164).

Therefore, in the current study, the researcher tried to ensure the validity of the questionnaire and interview content measures by consulting a panel of experts who could provide useful advice and suggestions. The panel of experts included professor Bob Williams from the Computer Science Department at Stockton campus and Dr Robert Coe from the Centre for Educational Measurement and Evaluation at Durham University.

A draft questionnaire and interview questions were distributed to these faculty experts before embarking on the pilot study. Through their suggestions and their advice the questionnaire was reconstructed. New questions were added and others were modified and used in pilot study. This procedure completed the treatment of the English version of the questionnaire and interview questions.

2.7.2 Translation

After receiving the feedback from the panel of experts regarding the content validity of the questionnaire and interviews and in order to apply them in Saudi Arabia, the next step was to translate each of the questionnaire and interview questions into Arabic. It was necessary to ensure that the Arabic versions of the research instruments retained the questions' English meaning and be as simple as possible to understand. For this reason, the researcher sought the help and advice of specialists in English-Arabic translation. All questions and instructions in the questionnaire and interview were translated from English to Arabic. The first draft of English to Arabic copies were checked by a postgraduate student in English-Arabic translation at Durham University. After some minor alterations, the researcher gave the English

and Arabic version to two experts in English-Arabic translation in Saudi Arabia – Associate professor Abdulrhman Al-Jemhoor at the English Translation Department at Imam Mohammad Bin Saud Islamic University and Besheer Zebal, Chairman of the Translation Department in the Ministry of Defense.

They separately examined the English and Arabic versions of the questionnaire and interview questions to ensure their clarity and eliminate any vagueness or incorrect statements. After they had checked these two instruments, the researcher met the specialists who gave their comments and suggestions to attain an accurate translation of them.

The Arabic version of the questionnaire and interview questions were checked and reviewed to ensure further the validity of their content by consulting a panel of experts in Saudi universities. Those experts were: Associate professor Abdulla Al-Mossa, the Dean of the Computer Science College; associate professor Saleh Al-Assaf at the Education Department, assistant professor Shwish Al-Shwish at the Libraries and Information Department at Imam Mohammad Bin Saud Islamic University.

By the end of this process it was possible to feel confident that the questionnaire and interview schedule was a sound basis on which to proceed.

2.7.3 Reliability

The measurement instrument is considered to have a high degree of reliability when it is consistent and accurate. In order to achieve a high level of reliability in the questionnaire, a pilot study was carried out.

Twenty copies of the questionnaire were given to twenty academic staff from different universities, colleges and institutions in the capital city of Saudi Arabia (Riyadh City) as a trial project. Academic staff were told the purpose of the study and were encouraged to write their comments and suggestions. Eighteen of the questionnaires were returned with a number of suggestions and comments. Two weeks later, copies of the questionnaire were given to the same eighteen academic

staff to assess its test-retest reliability. The correlation coefficient of the questionnaire test-retest was as follows:

Table 2.3: Correlation Coefficient to Measure Reliability of Questionnaire

Test	TQQ 9	TQQ 28	TQQ 37	TQQ 52	TQQ 64	TQQ 74	TQQ 82	TQQ 106	TQQ 111	TQQ 117	TQQ 123	TQQ 135	TQQ 148	TQQ 160
Correlation Coefficient	.72	.85	.93	.85	.91	.69	.86	.95	.88	.73	.88	.87	.96	.81
Retest	TQQ 9	TQQ 28	TQQ 37	TQQ 52	TQQ 64	TQQ 74	TQQ 82	TQQ 106	TQQ 111	TQQ 117	TQQ 123	TQQ 135	TQQ 148	TQQ 160

Table 2.3 shows that the questions of the questionnaire were divided to groups. Every group covered one aspect of the research, for example the group TQQ9 includes questions from 9 to 27 of the questionnaire and group TQQ28 includes questions from 28 to 36 of the questionnaire and so on.

DeVellis (1991) suggests the acceptable degree of reliability for questionnaire tools is as follows: below 0.60 unacceptable, between 0.60and 0.65 undesirable, between 0.65 and 0.70 minimally acceptable, between 0.70 and 0.80 acceptable, between 0.80 and 0.90 highly acceptable and above 0.90 strongly reliable. From the correlation coefficients it can be seen from table 2.3 that the range is from the minimum of 0.69 for relatively acceptable to the maximum of 0.96 for strongly reliable. This means the correlation between the two applications of the questionnaire was high and reliable; these figures support the reliability of the measuring items of the questionnaire. At the same time, the pilot study resulted in some changes in the questionnaire in terms of clarifying some statements and re-arranging the order of the questions.

Two male academics who were not part of the main fieldwork sample, were chosen for interview in the pilot study. They were informed of the reasons for the study and encouraged to talk freely and make suggestions. The pilot study for the interview was very useful. It revealed some difficulties that might occur during the interview, such as timing of the interview and embarrassing questions, which were omitted.

2.8 Main fieldwork

It is vitally important that the researcher has to spend a period of time with the people who are the sample of the study through fieldwork. This study was not based on fieldwork of an ethnographic kind. As a participant in Saudi academic life, the researcher had already understood much about the subjects of this research that outsiders would need extensive fieldwork experience to appreciate and understand. Secondly, this research involved the collection and analysis of public documentary material as well as other studies of aspects of Saudi academic life. As will be seen, this data needs to be taken into account to interpret the results of the questionnaire analysis and of the interview data.

It was decided to administer the questionnaires and conduct the interviews in the period between October and December 2002. The beginning of the first term was considered a suitable time to do the fieldwork in Saudi Arabia. All academic staff were present in the universities and colleges. Therefore, the questionnaires were distributed easily and interviews were conducted very smoothly.

The fieldwork for this study consisted of six main stages, as follows:

1) Gaining access;
2) Data collection and analysis;
3) Recording interviews;
4) Transcribing interviews;
5) Interpreting interviews;
6) Feedback of the initial results of the research;

2.8.1 Gaining access

In order to start to collect data and information, researchers should obtain permission to conduct their studies. Cohen et al (2001:53) emphasise the importance of gaining access; they state: " Investigators cannot expect access to a nursery, school, college, or factory as a matter of right. They have to demonstrate that they are worthy, as researchers and human rights, of being accorded the facilities needed to carry out the investigation." This is especially important in Saudi Arabia where academics have a

responsibility to be accountable to appropriate authorities in government. In any case, without such official approval, fellow academics would not feel confident about being part of the research.

A letter was sent requesting permission from the Saudi Arabian Cultural Bureau in the United Kingdom that clarified that the researcher was a PhD student in Durham University in England and needed help to conduct interviews with academic staff and to distribute copies of the questionnaire to them (see Appendix C).

The main advantages of gaining permission were as follows:

a) It ensured co-operation from officials at different universities and colleges;
b) Questionnaires were distributed to academic staff whether personally or through official channels;
c) All interviewees agreed that their interviews could be record.

2.8.2 Data collection and analysis

The target population in this study was academic staff that teach at Saudi universities and colleges in Riyadh. A letter from the Saudi Arabian Cultural Bureau in the United Kingdom was sent to the Education Department at Imam Muhammad Bin Saud Islamic University in Riyadh requesting approval to carry out the data gathering in the Kingdom of Saudi Arabia. Thereafter, when the researcher had got the final approval to conduct the study, the Education department at Imam Muhammad Bin Saud Islamic University was appointed to supervise the data gathering process. The Chairman and the members of the department who are colleagues of the researcher cooperated, as expected, and the time schedule for questionnaire distribution and collection was arranged.

The researcher organised the distribution of most of the questionnaires to male academic staff. On the other hand, questionnaires were sent to female academic staff, in different universities and colleges, through formal channels and through female academic staff who cooperated with the researcher. Within six weeks, 235 (out of 650) questionnaires were returned completed by male and female academic staff. 34 questionnaires were discarded for several reasons: some of them were incomplete,

some questionnaires were filled in by non-Saudi academic staff and some of them by academic staff who have no PhD degree.

The reason why the researcher distributed 650 questionnaires (more than double) while the sample of the study was 320, was because most of the academic staff are typically uncooperative in terms of being willing to fill in questionnaires. Many academic staff in Saudi universities advised the researcher to distribute double the number of questionnaires or more, in order to save time and get enough returned questionnaires.

Table 2.4: Sample of Distribution for Academic Staff

Universities Colleges, Institution	Gender	Distributed Questionnaires	Received Number of Questionnaires	Received Percentage
King Saud University	Male Female	220 65	72 33	32.7% 50.8%
Imam Muhammad Bin Saud Islamic University	Male Female	115 10	42 3	36.5% 30%
Girls' Colleges	Female	190	73	38.4%
Institute of Public Administration	Male Female	40 10	11 1	27.5% 10%
Total	----	650	235	36.2%

As is indicated in table 2.4, cooperation from the academic staff in Saudi universities and colleges was low. The percentage of the distributed questionnaires gathered in, was 73.5% of the target sample figure. For surveys such as this in Saudi Arabia this is a reasonable rate of return.

However, during the period of the fieldwork (three months) different academic staff from various universities and colleges were interviewed. The total number of interviewees was 24 academic staff (16 males and 8 females) from different specializations.

2.8.3 Recording interviews

Before the researcher conducted interviews with academic staff, he explained to them the purpose of the interview and the time that might be taken. Furthermore, he assured them about confidentiality. He asked them permission to tape record the interviews. All participants (male and female) approved and all interviews were recorded whether face to face or by telephone. For the most part, interviewees were happy to talk about this subject and to share their opinions, expectations and problems. However, it is worth mentioning that it was important to use good quality recording and other equipment.

2.8.4 Transcribing and translation of interviews

The next step was to transcribe the entire interviews that were recorded in order to facilitate the researcher to elicit data and information drawn from interviews accurately. Thereafter, interviews were written up into Arabic for example, (see Appendix D). Transcription takes a long time and at times the significance of what people are saying is not clear. This becomes clearer later through insights, which come from being totally immersed in the analysis for a long time and in the light of other data, which had been collected.

Translation of each of the interviews from Arabic to English took place after the supervisor and researcher defined which parts from each interview needed to be translated. The researcher then embarked on translating the important information. It was necessary to ensure that the translated versions of the interviews were appropriate. To check the accuracy of the translation the researcher had recourse to the advice and help from some specialists in translation. After they approved the translations, the detailed analysis and interpretation of the texts began.

2.8.5 Interpreting interviews

This process of interpreting interviews is one of making that which is *tacit* into that which is *explicit.* It is a process of learning for both the interviewer and the interviewee. This process of making the tacit explicit is an important one and very

useful in learning about attitudes, values, and culture in organizations. The process of interpretation is one, which leads to a deeper understanding of a society or its institutions, ways of thinking, attitudes etc. This does not mean that this kind of interpretation should stand alone. The interpretations arrived at in this way need to be checked. Questionnaire-generated data from larger samples is one way of doing this. In addition, we have documentary materials – policy statements, reports, evaluations etc – to consult, so that different sources of data can be triangulated. For example, as will be seen later in the next chapter, Table 4.19 and 4.20 revealed that overall, the findings of questionnaire and interview indicate that the majority of academic staff do not display any anxiety about the prospect of developing web-based training courses. These findings concur with the conclusions reached by Gilmore (1998) and Christensen (1997) who indicated that academic staff who have used the Internet as a tool in distance learning had significantly more positive attitudes and reduced anxiety than those who have not. This general point is also supported by comments from interviewees. This is a process of checking the validity of data drawn from one source or method against information and data derived from different sources or from the use of other methods (Burgess, 1991)

The process of interpreting interview material is a complex one. The researcher sees things in the comments of interviewees that the interviewee is not aware of. In addition, the researcher is faced with task of relating what people say to the context in which they say it. That context includes their experience and education and the values of their society. All of these factors shape and become part of the accounts people give of themselves, their work and their views of the future. The task for the researcher is to interpret what interviewees say in the light of these considerations.

Speech, however, has more than one dimension. Researchers have to listen to **what** people say. But they also need to observe **how** they say it and whether or not there are strong feelings involved. To give a satisfactory account of someone's attitudes, thoughts, feelings and actions (experience and behaviour) have to come into view during the interpretation of interviews. Triangulation helps establish whether the interpretation is credible and reasonable.

2.8.6 Feedback of the initial results of the research

In addition to triangulation, it was possible in this research to check the results of the work by discussing them in a systematic way with those who were interviewed and the questionnaire's respondents. In this way the research methodology met many of the conditions of the 'joint inquiry' discussed by Reason and Rowan (1981).

In this method of research, researchers are encouraged to share their results and interpretations with the people they are studying. If those is being researched agree that the interpretations given by the researcher are reasonable and realistic and fit in with their experience, then the interpretations can be said to have validity. After one year of the fieldwork, as part of the research process, the initial results of the analysis of the questionnaire data and of the interviews were written up into a summary paper. This paper was circulated to 16 people (from 18) who had been interviewed and filled in the questionnaire for this research. Two interviews were carried out with senior decision-makers from Imam Muhammad Bin Saud Islamic University and the Institute of Public Administration in which the results of this work were discussed. Their feedback was useful; it provided an official perspective on the themes of this study and many additional insights into the problems of higher education in the kingdom.

In addition, a small group of academic colleagues – three in all – came together to evaluate the summary paper. I report their discussion here because their comments are well-informed and critical and, in the course of discussing my research results, they made some important additional points. It is difficult to arrange such discussions in Saudi Arabia. People are busy. They do not like to commit themselves to additional work. They are not used to being involved with the work of their colleagues. Women are more prepared to help fellow researchers and five of them did so from the larger group of sixteen. It was, therefore, difficult to convene such a group. The fact that only three came in the end is disappointing, but the discussion was very informative.

This feedback on the research has been useful in re-interpreting the original analysis and supported the general conclusions emerging from it. They were all people with a

lot of experience of Saudi higher education. They know from experience the problems faced by academics in this system. They understand the constraints within which Saudi academics work and the two senior officials are indeed close to policy-making in relation both to information technology and training. Their comments on the conclusions of this research opened up further questions that need answers.

2.9 The statistical methods

The data obtained from the questionnaires and interviews was analyzed using SPSS (Statistical Package for Social Sciences) and NVivo software. The research used the statistical tests for the sample of the study, which were appropriate for parametric methods, particularly questionnaires.

Without doubt, it is important to know the opinion of statistical specialists with regard to the analysis of data. A professor from the psychology department at Imam Muhammad Bin Saud Islamic University, who specializes in statistics, determined the suitable statistical instrument for this study based on the questions of the study. Therefore, the current research used the following statistical tools to analyze the data of the study:

1. Test and retest to measure the reliability and consistency of the instrument (questionnaire) through correlation coefficients.
2. Frequencies and the percentages in order to describe the sample of the study.
3. *T* test has been used to ensure that there are significant differences between the responses of the male academic staff and female academic staff. (The number of the sample must be more than 30 to allow the comparison to be made). According to Gall et al (1996:390), "Statisticians have found that *t* test provide accurate estimates of statistical significance even under conditions of substantial violation of these assumptions."
4. Variance analysis (ANOVA) has been used to ensure that there are significant differences between the responses of the academic staff in terms of the college, academic range, age, and years of experience (used to measure the comparison of more than two groups).

The two different gender groups of academic staff were used as independent variables in each ANOVA.

It is worth mentioning that Professor Abdullah Al-Katai, the Chair of the Measurement and Evaluation Center in the Ministry of Higher Education in Saudi Arabia, suggested that, before analysising the interview data by SPSS, it is necessary for each question to be coded and then classified into different categories for better understanding of the respondents' perceptions about the different issues. The frequency of the responses within each category was later used as a criterion for analysis and interpretation of the data.

Therefore, an interview coding form (see Appendix E) was designed on which to transfer the interview data for each respondent. Professor Abdullah Al-Katai reviewed the interview coding form, suggested some minor alterations and added some additional words and items. The final version of the interview coding form was printed to use.

When the response of one of the academic staff was compared with that of the researcher for coding the same interview, the result showed 72% of both answers were the same. This is an acceptable percentage for the reliability of coding in education and social science research.

Frequencies and percentages have been used in order to describe the responses of the interview sample of the study. The researcher also attempted to use Chi-square to analyze the interview data and compare for non-parametric variables. But the SPSS programme was not appropriate because the sample was small.

On the other hand, the interview data has been analyzed by the NVivo programme that was designed to help in qualitative data analysis. With this programme the researcher is able to analyze text, interviews, archival documents, and so on. In order to make NVivo work, it is necessary to organize projects into a database for documents and nodes that the researcher creates, and attributes of documents or nodes to store data about people, sites and cases (Academic Information System, 2003: online).

In this case, according to QSR (online: undated), NVivo is going to help in different ways, for example, data documents and nodes can be linked as research ideas develop. It can show where concepts occur in the text, and group documents or nodes in sets that can be filtered, changed or examined as ideas develop. In this study, the data from interviews, questionnaires and literature reviews have been coded in order to link the ideas and develop them. In this study, the researcher has inserted all files of data of this study (interviews, questionnaires, documentary research and literature reviews) into NVivo database. Each document was carefully reviewed and key coding terms were inserted. This made it possible to see where ideas and interview responses were related and to see patterns in the data.

2.10 Conclusion

This chapter has outlined the research methods and discussed why these research methods have been employed. In addition, it has reviewed the main research tools that the researcher has used in his study and indicated the advantages and disadvantages of them. Providing the reader with a clear picture of tools that have been employed in this research was the main objective.

The strength of this approach is that it provides a cost-effective way to collect information. Further, the design of the questionnaire allows for statistical analysis of the attitudes of the academics being studied. The interpretation of these analyses does not rest alone on questionnaire data. The study was supplemented with in-depth interviews. These, in their turn, are interpreted against a background understanding of social and economic change and higher education policy in Saudi Arabia. In this way the questionnaire data is contextualized; more than that, feedback from those interviewed has enabled the researcher to feel confident that the interpretations are reasonable. One colleague said for instance:

> *"I wanted to inform you of my admiration and delight in the way you tackled the topic even though I know it is not yet completed. As regards the results and recommendations of the research, I have no reservation in saying that they are within the limits of what is expected, as seen from my personal experiences in the professional framework."*

Another one stated:

> *"In my opinion, the results of the study are consistent with what I have expected from the attitudes of the academic staff towards using the Internet in training, let alone in learning and education processes generally. Hence, I see that these results reflect in a greater degree the reality of academic staff attitudes (study sample)."*

On the other hand, there were some criticisms of this research. One colleague said in a written comment on the research paper circulated:

> *"I think there are more details in the results, which to me seem lengthy and could be summarized, in specific points. I think the quotations from the interviews are too much and in most cases not needed. Under each result there are a number of details, which preferably would be in the form of separate points. The conclusions based on questionnaires seemed documented and logical to a greater extent, contrary to those based on interviews, because they are individual opinions not good for building judgment on, but used as support data for specific viewpoint."*

This distinction in the mind of this academic is a common one. The approach taken here, however, is different. The real challenge is precisely that of trying to understand how individual opinions are built up and what has shaped them. For it is these opinions that frame the perception of individual academics and influence the choices they make about curriculum methods in their teaching.

Another academic revealed that:

> *"The idea of the research is new and good, and the study might be one of the leading in this field, especially if we know that electronic learning in the Kingdom is still in its early stages. There are many obstacles that have been discussed, and many that have not been discussed such as the electronic learning programmes, and whether they are available for the Arab user? What are the plans on the level of the government that will activate electronic learning? Also the social dimension is thought of as a big obstacle. How are we going to study it and know its causes? On all occasions it is a good study even if I am not convinced with the way the results are listed in a story like manner. That might lead the paper away from accepted scientific methodology.*

These reservations are typical of people who adopt strongly empirical approaches in the methodology of the social sciences. They represent the dominant way of thinking in Saudi Arabia. This study shows, however, that there are different ways to be empirical and to feel confident about the evidence on which arguments can be based.

The complexity of changes taking place in Saudi higher education demands a methodology of study that allows us to take into account different interpretations of the meaning and significance of such changes. The methods used in this study are one way to explore how Saudi academics make sense of their world. It provided one way to relate the thinking of academics about e-learning to their thinking about universities, teaching and learning, the future development of Saudi society and to see how such thinking relates to aspects of their work situation. This is a pioneering study in a new field of academic activity. It needs appropriate methods of research.

CHAPTER THREE

THE NEED FOR NEW TECHNOLOGY IN SAUDI ARABIA

CHAPTER THREE: THE NEED FOR NEW TECHNOLOGY IN SAUDI ARABIA

The Kingdom of Saudi Arabia has developed dramatically in all domains – the economic, social, cultural and industrial. In addition, as a result of communication with other countries, especially the developed countries, the Saudi government is striving to import the new technology in order to reap the benefits from it. To understand to what extent Saudi Arabia needs this new technology, it is necessary to shed some light on key aspects of the state and the society.

This chapter provides a necessary account of Saudi Arabia, including its geography, climate, population, the regions and major cities, religion and economy. It then goes on to outline the factors of social change in Saudi Arabia, especially in the labour force, its training needs and Saudi Arabian plans for future modernization. Finally, the use of the Internet in Saudi Arabia is discussed. Each of those elements has implications for the nature of society in the kingdom.

The aim of this chapter is to clarify the context against which the attitudes of Saudi academics have to be understood and explained. The context helps explain, too, the rationale and problems of Saudi policy towards e-learning in higher education.

This chapter will have a major focus on the role and effect of information technology on economic development in Saudi Arabia. The task is to understand the relationship between complex changes at the macro level and how these impact on educational institutions (in the study, universities, colleges and Institute of Public Administration) at the meso level. Finally, the link between these changes and the attitudes of academics at the micro level has to be clarified.

This is a complex and important challenge. One of the interviewees in this study made this point very well. Her words are very appropriate at this point in the study. Commenting on the research results, she said:

> *"The study is completely abreast with what is happening in the current times. Training is becoming an urgent need to develop and upgrade human resources in a constant manner. Also, the current technologies have enforced big challenges that highlighted the need to reconsider political, economical*

and social polices. To counter these challenges, the need is becoming more urgent to develop an infrastructure for education and training and modernize its methods, in order that the learner, who is surrounded by inputs of different communication media, will benefit greatly. The application of the study in the kingdom is suitable due to its vast expanse and the concentration of training centres in big cities. The results of the study ensure this, through the positive attitudes (highly positive) of the academic staff in the Saudi universities and higher education institutes. The results are applicable to the realities of Saudi society. Some of the recommendations express a genuine desire to make this type of learning and training a real success."

The Kingdom of Saudi Arabia is an independent country. In 1902, King Abdulaziz Ibn Saud succeeded in capturing Riyadh. Saudi Arabia was established in 1932. Riyadh City, the setting for this research, is the capital of the country.

An understanding of the geography of the country is crucial to any account of problems that must be solved in the field of labour force development and in higher education policies for e-learning.

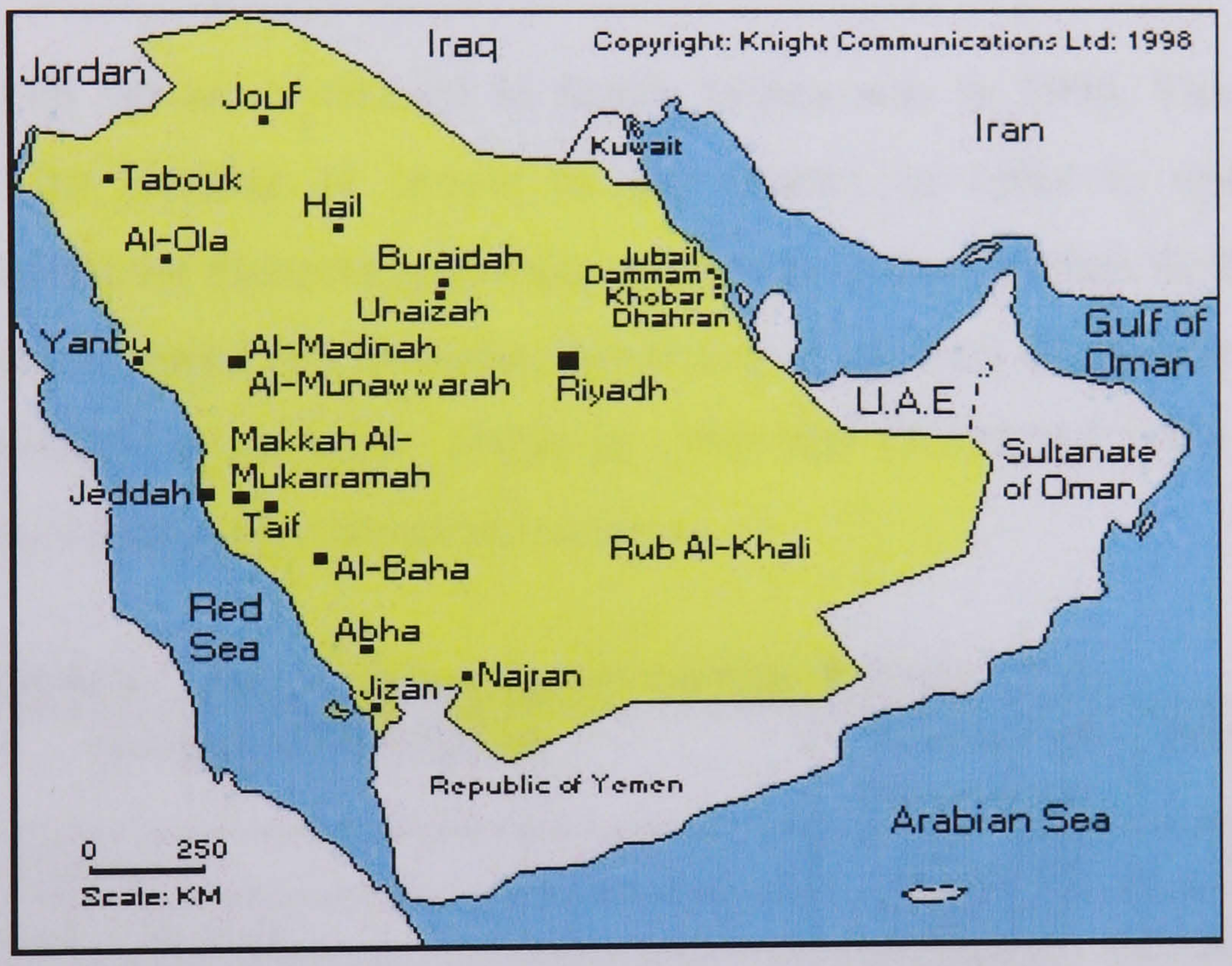
The Kingdom of Saudi Arabia lies at the furthermost part of southwestern Asia. It comprises the bulk of what is commonly known as the Arabian Peninsula with long frontiers on the Red Sea and the Arabian Gulf and with the Suez Canal near to its northwest border and the Indian Ocean to the south. It has a land area about four-fifths of the Arabian Peninsula and this area consists of a distinct geographical unit.

The kingdom covers about 2,250,000 square kilometers (868,730 square miles). It is bordered on the north by Jordan, Iraq and Kuwait; on the east by the Gulf, Bahrain, Qatar and the United Arab Emirates; on the south by the Sultanate of Oman and Yemen; and on the west by the Red Sea. The Kingdom of Saudi Arabia lies in a strategically important position (Metz 1993: 49).

There are more than 6000 cities, towns and villages in Saudi Arabia. The major cities are: Riyadh, the capital, in the central region (Najd); the Holy Cities of Makkah and Madinah (the two holiest cities of Islam); Jeddah, the main port in the western region (Al-Hijaz); Dhahran, Al-Khobar and Dammam, the main port in the eastern region (Al-Ahsa), near the Gulf coast; and Abha in Asir (the southern region) (Janin, 1994:15).

In short, as Long (1997:1) has noted, "Saudi Arabia is a country of startling contrast – a huge land and mass and small population; a barren desert terrain situated over great oil wealth; a traditional Islamic society undergoing rapid modernization; a closed society that is often in the news…the Saudis are a deeply religious, traditionally conservative, proud people who have been forced to make the transition from the pre-industrial to the modern age in less than two generations…. Under the country's arid surface lie roughly 260 billion barrels of oil, about one-quarter of the world 's proved oil reserves; and most of it is available for export…Saudi society is thoroughly Islamic and oriented to the extended family; bloodlines are ultimately more important than oil wealth".

Figure 3.1: Map of Saudi Arabia



Source: http://www.saudinf.com/main/index1.htm

These geo-political circumstances have had decisive implications for the way in which the education and training system has developed in the kingdom.

Formal education provision developed first in the cities. It remains a key problem to extend learning opportunities in rural and desert areas, especially in the field of higher education. These issues will be examined in more detail in Chapter Four.

3.1 Population

As a result of fast economic and urban growth, nowadays almost 95% of the population in Saudi Arabia is settled, even though most of them were nomadic or semi-nomadic until the 1960s. People in Saudi Arabia are considered to be extremely conservative and follow Islamic law (Shari'a) (Bureau of Near Eastern Affairs 2001:online).

The majority of the population in Saudi Arabia is ethnically Arab although there are small ethnic minorities from different countries, such as, Indonesians, Africans, Indians, Turks, and others.

The last population census conducted in Saudi Arabia was in 1999. This census aimed to know the number of people in the country in order to update the demographic database for planners and researchers, to help them in their fields and to meet the development plans' requirements. According to Ministry of Planning (1999: 495), the total population of Saudi Arabia in 1999 was 19,895,232. This number covered the country's thirteen administrative areas.

Table 3.1: Population in Saudi Arabia (Census 1999)

No	Groups of Population	Number of Population	Percentage
1	Saudi Citizens	14,872,802	74.8%
2	Male Saudi Citizens	7,457,350	50.1%
3	Female Saudi Citizens	7, 415, 454	49.9%
4	Non-Saudi residents	5,022,428	25.2%
5	Male non-Saudi residents	3,347,776	66.7%
6	Female non-Saudi residents	1,674, 652	33.3%
7	Saudi citizens less than 25 years old	9,785,370	65.8%
8	Male Saudi citizens less than 25 years old	4,900,807	33%
9	Female Saudi citizens less than 25 years old	4,884,563	32.8%

Important points to note include: non-Saudi residents constitute 25% of the population and more than 2/3 of the total population is under the age of 25 years. Both points have major implications for education and training in the kingdom.

A male academic from Imam Muhammad bin Saud University believed that e-learning will solve a lot of problems that face Saudi society, especially in higher education. He stated:

> *"It is enough that it is a new economic form that solves a lot of problems. One of these problems is the huge numbers of high school graduates and their getting into university. I think if there is no other benefit other than this it is quite enough."*

In general, during the last thirty years, the population in Saudi Arabia has been growing rapidly, as in other developing countries. The growth of cities and towns has been very fast. Movement to the urban centres has resulted from several factors; cities and towns have become the undoubted leading commercial, political, cultural, and religious centres.

As regards the effect of population on education, that happens in many different ways. For instance, the high population growth (3.5% annually) imposes serious pressure on the state's budget in general and the educational system in particular. This has been a problem in the last few years and will become a persistent problem as long as the education budget is unable to cover the accelerated need for education.

On the other hand, the development of e-learning technologies offers many solutions to these problems. There is a particular problem in expanding higher education for young people. This relates to the additional need to reduce the country's dependence on foreign labour. The changes within educational institutions that will enable the country to meet those challenges depend very much on how they are perceived and understood by educators, particularly those at the leading edges of knowledge, and new technologies in the universities and higher institutions.

3.2 Religion

The Kingdom of Saudi Arabia has always been important to the world's Muslims because their two holiest cities are located there: the Holy City of Makkah contains the Ka'ba, the birthplace of the Prophet Muhammad and the home of Islam's most important shrine; and the Holy City of Madinah where the Prophet established his first community and laid the foundation of Islam.

Islam is the state religion and the Holy Quran is the constitution. In order to understand the history of the kingdom and its political, economic, educational and social development, it is necessary to realize that Islam permeates every aspect of a Saudi Muslim's life. Moreover, it permeates every aspect of the Saudi Arabian state (Mutabbakani, 1993: 11-15).

What Cameron et al (1983: 755) stated twenty years ago remains true: "Saudi Arabia is the heartland of Islam, the guardian of the Holy places; and nowhere is the influence of religion felt more directly or explicitly. Theoretically, religion and the state are one, and the Saudi constitution is the Quran. The law is Shari'a (the totality of the religious and moral laws of Islam) law and the principal school adhered to is the Hanbali School, although the other three main law schools of Islam are also recognized and respected"

Islam and Saudi society go hand in hand together. Islamic religion permeates all aspects of Saudi society and government sectors, especially education. From these facts the first and second principles of the educational system are derived: (1) Belief in Allah as the only God, Islam as the religion and Muhammad (may peace be upon him) as God's Apostle and messenger. (2) Total Islamic concept of life, the Universe and of man depend entirely on Islamic law. The syllabuses, for example, in all stages of education stress the religious subjects which consist of the Holy Quran, Hadith, Figh (Islamic Jurisprudence), the Creed, Searah (the biography of the Prophet (PBUH) and Tefseer (interpretation of the Holy Quran); these are compulsory subjects with little differences at each level.

A male academic from the Institute of Public Administration suggested that the new approach to learning using the new technology will help Muslim people understand their faith. He said:

> *"There are many benefits. One of them is to sharpen the trainees skills in using this service and give him the knowledge enrichment he needs, which is an important aspect in this process, not only in the local level but on the Arab and Islamic level, too, and the international."*

This religious culture has important implications for e-learning technologies. Saudi academics are, as will be seen, enthusiastic about the new technology. Nevertheless,

in nearly all conversations with them and among them, there is a concern to ensure that new methods of teaching and learning should not undermine the Islamic values of the society. As one academic interviewed noted:

> *"Regarding communication technology and the speed of communications, this closed society, in an isolated environment of the world, finds itself open and exposed to various cultures and civilizations as a result of communication technology, which made it easy to reach other cultures and their habits, norms and values that may be contradictory to the ones here."*

3.3 Economy

Saudi Arabia has huge quantities of oil and gas. It has approximately 25% of the world's oil reserves and has the fifth largest gas reserves in the world. The cautious planning of the government in Saudi Arabia, through a number of five-year development plans, is the major cause of the strength of the Saudi economy (Mutabbakani, 1993: 61-63).

Yet this wealth is not sufficient to ensure further economic development. Indeed, for a decade since the Gulf War of 1991, Saudi economic growth has been very slow. Cordesman (2001b: 9) has shown "The data indicated that the Saudi economy grew by 9.5% in real terms between 1969 and 1974, by 15.5% between 1974 and 1979, but then dropped to 6.5% between 1979 and 1984. There was virtually no real growth between 1985 and 1989. The sudden rise in Saudi oil revenues caused by the Gulf War led to a 3.4% rise in 1990 and a 6.0% rise in 1991… Growth then averaged about one percent annually between 1993 and 1999."

Per capita incomes have not grown significantly and there are high levels of unemployment, particularly among young men. Against this background the government seeks further modernization and diversification of the economy. Education and training have to play their role in this.

A male academic interviewed regarding the investment of the new technology in the educational system noted that:

> *"Economically, the Internet will get rid of many problems such as space, time, saving money and the number of students. The second thing is the possibility of individual learning instead of public learning, which is very*

clear." (He means by this independent learning as opposed to teacher-dependent, classroom-based learning)

The Saudi government so far has published seven five-year development plans. The main points of the seventh plan (2000 – 2004), are as follows:

1- To maintain the general policy of a free economy in the context of Islamic religious principles.
2- To focus on the development of human resources.
3- To continue to place an emphasis on privatization as a strategic economic option.
4- To pay special attention to technological development and the need to build a scientific and technological database to enable the country's researchers and scientists to deal with the advanced technology of today. (Ministry of Planning, 2000b:107)

To lessen its dependence upon oil, Saudi Arabia has for a decade promoted heavy industries (Janin, 1994: 38). Furthermore, the Saudi government established two industrial cities, one in the east coast (in Jubail) and the other on the west coast (in Yanbu). These two cities consist of huge numbers of factories for the basic manufacturing industries and petrochemical industries.

Urbanization is bringing people, especially young people, from villages and small towns to the big cities such as Riyadh, Makkah, and Jeddah with major consequences for the role of these cities in the economic and political system. People in Saudi Arabia can buy roughly everything in the world as a result of modern communications and transportation (Long, 1997:19).

As a result of oil discovery, better education for people, a strong economy, the middle class appeared in Saudi society. Heller and Safran noted this twenty years ago (1985:9) and added that there are three factors, which helped explain the emergence of the new middle class in Saudi Arabia. These factors are modernization, the security forces and the educational system. Halpern (1963:56) (cited in Algain, 1973:39) describes the middle class: "They are new men. They are often the very first in the history of their family to be literate. They often discover their best friends

at school... not among kin or established brotherhood or faction. They are the first to trust strangers on grounds of competence or shared ideology."

The continued growth of the new middle class led to many changes. Saudi people, who have studied in western countries and who belong to this class, often feel it is necessary to make changes in all aspects in Saudi society. For example, they tend to have progressive attitudes toward the role of women in society. They have high expectations for the education of their children.

The economy development of Saudi Arabia has affected all aspects of life in the country, such as providing more educational chances, raising the standard of living and changing social values, such as those which value loyalty to relatives, and fidelity to tribal leaders. There are better educational opportunities than in the past and a huge increase in the number of the students (boys and girls). The salaries of teachers (male and female) are considered to make teaching one of the highest paid jobs in Saudi Arabia. On the other hand, instability of the oil price in the last a few years has affected the ability of the government to build new schools. Many school buildings in Saudi Arabia are still rented by government.

The speed and pressure of such changes creates new challenges and stresses for educators. The pressure of increased demand (due to demographic and socio-cultural factors) on education at all levels means that new ways have to be found to meet it. E-learning promises new methods of achieving this.

3.4 Social change in Saudi Arabia

Saudi society is considered to be unique because it has transformed from being a very poor society to a very rich society in a short period of time (about thirty years). Furthermore, the impact of changes in all aspect of life has received increased scrutiny in the last few years. On the one hand, Adams, (1986: 167-191) and Al-Farsy (1990) speculated whether the pressure of western modernization has directly affected the socio-cultural transformation of Saudi Arabia or not. On the other hand, most Saudi people are still conservative and religious due to instructions within Islam that are tightly embedded in its society, culture and customs.

A male faculty member confirmed that and thought that using e-learning in in-service training will help Saudi society to provide learning and training opportunities for both men and women and keep the society conservative. He said:

> *"We are a conservative community that consider traditions and Shari'a law and will not permit the availability of common programmes for men and women together. So providing training through the Internet will suit our society very much. Therefore, women can get the service at their homes or in the place of their work with no problems. According to the question, I don't think there is any primary difference between men and women, and the programme can be given to whoever wants it man or woman."*

This interplay of tradition and change, the old and the new, and the emergence of new social groups within the society, are defining features of Saudi Arabia. Education is at the centre of all this. What values should govern it? How shall it be made available to people? If education is itself a catalyst of change, how will it affect the social structure of Saudi society?

Saudi Arabia is now in a position to achieve an educational revolution using new learning technologies. What form that revolution will take is still, however, unclear. Much will depend upon the views taken about it by Saudi academics. Therefore, it is important to mention the key factors of social change in the country.

3.4.1 Economic growth

Before the discovery of oil in Saudi Arabia, the country was very poor. Its economy was based on agriculture, fishing and the fees taken from Moslem pilgrims who came to visit Makkah. The discovery of oil was the most important event to change Saudi society (Khtani, 1992:29). In less than 40 years the revenue from oil created great resources for improving the society.

Changes in the socio-economic situation of the Saudis meant that, for first time in the modern world, people in the country could contact others through an established network of new, modern roads between cities, or contact other countries through new technology in telecommunications such as television, telephone and the Internet.

The increase of the revenue from oil enabled Saudi families to possess various kinds of goods that were not available to them in the past. For instance, nowadays most Saudi families have more than one car; they have a computer and more than one telephone line at home. Moreover, they have modern homes that contain many rooms and facilities (Almunahi, 1983:13). They have high expectations that their wealth will continue to grow

However, the budgets of Saudi Arabia depend on revenue from oil every year. Therefore, the Saudi gross domestic product (GDP) and the Saudi gross national product (GNP) vary from one year to another. The past decade, as explained, has been one of slow growth. This has created some disappointment and some anger among Saudi people.

3.4.2 Education growth

Education is very important to economic development and growth. Therefore, the Saudi government recognized that modernization needs a well-educated people. As a result of economic growth, the Saudi state allowed free formal education for all people at all levels. Schools have been established throughout the country. Over a period of forty years eight universities and more than one hundred colleges have opened.

Interestingly, the illiterate Bedouin began to send their children to school for the first time. With increases in the Saudi population the number of student enrollments at all levels has increased. For instance, in 1964 the number of students was 250,000 in general education, while there were 3,999,778 students at this level in 1998/1999 (Cordesman, 2001b, 35).

The Ministry of Education is one of the most important ministries in the country. It controls more than 5831 elementary schools, 3008 intermediate schools and 1466 secondary schools for boys (Ministry of Planning 1999:55-61).

As regards girls' education, in 1970 there were only 15 elementary schools in Saudi Arabia. By 1999 this number had risen to 5705 elementary schools, 2460

intermediate schools and 1384 secondary schools for girls (Ministry of Planning 1999:55-61)

The number of technical secondary school – industrial secondary schools and commercial secondary schools – is 36. At the same time, there are 35 higher institutes in the state, such as Telecommunications Institutes and Technical Institutes (Ministry of Planning, 1999:65).

3.4.3 Population growth

Before and after Saudi Arabia unification, there was not a reliable figure for the overall population until 1966. The Saudi authority estimated the population was 5,662,000 in 1966. According to the Ministry of Planning (1999: 495) the last population census conducted in Saudi Arabia was in 1999. The total population in Saudi Arabia in 1999 was 19,895,232. Most of the population is focused in the major cities. The density of people in these cities is more than 1,000 people per square kilometer (2,600 per square mile).

On the other hand, Cordesman (2001b: 1) reported that, as a result of population growth, Saudi Arabia has faced serious challenge because Saudi oil wealth is limited. He mentioned that, for example, nowadays, there are a lot of educated people (both men and women) who face a dead end job when they graduate from higher education.

Against this background it is essential that ways should be found to improve the employability and further professional development of Saudi graduates. If the new Saudi economy is to succeed, graduates will require appropriate skills and all employees will have to learn new skills. In this context, e-learning has an important new role. That role can be developed because Saudi Arabia now has an extensive system of telecommunications. One of the interviewees commented that:

> *"There are services provided in a fine way with regards to providing the equipment and ease of communications and the speed of communication and exploring. There are no real negative aspects."*

3.4.4 Communication and technology growth

Kashkoul and Ba-lsa, Arab News staff (2002, online, 1), state: "Information and communication technology (ICTs) are powerful tools for stimulating economic growth and social change. They cut across all Saudi Arabia's traditional sectors: health care, community development, national, regional and local government, economic growth and education."

In the 1960s, when the government attempted to develop media such as radio, television and telephone in Saudi society, there were some Saudi conservatives who resisted the new communication tools. They believed the media would affect their traditional way of life and Islamic religion. However, by the 1980s the situation was totally different in terms of using the mass media. For example, there were two Saudi channels, one in Arabic and another one in English, and more than 20 newspapers and magazines participating in the development process (Almunahi, 1983:19).

The spread of new technologies and satellite networks from space has affected Saudi culture, opening it up to foreign cultural influences. Key sections of public opinion no longer fear such changes. People use the new communication technologies and those who are educated are keen to see it develop further. This is particularly true, as might be expected, among academics. They are in a position, therefore, at least in principle, to lead these cultural changes. They are certainly aware of the changes that the new technology is bringing.

For instance, according to the findings of this study, it can be seen from the table 3.2 that a high majority of respondents (96.1%) agreed that universities and colleges should do more to train already qualified experts and technicians for their roles in the society. Moreover, a high majority of respondents (93.9%) believed that higher education institutions should play an important role helping organizations in society and the economy to develop and change.

Table 3.2: Perception of the Role of Universities in Saudi Society (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
Universities and colleges should do more to train already qualified experts and technicians for their roles in the society.	1	.4	2	.9	6	2.6	109	47.0	114	49.1
Higher education institutions should play an important role helping organizations in society and the economy to develop and change.	1	.4	2	.9	11	4.8	94	40.9	122	53.0

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

In this context, both the questionnaire and interview data of this research demonstrated that the majority of respondents believed that information technology and the Internet do have a clear influence on Saudi society. Asked whether they thought that information technology had a positive or negative impact on Saudi society, most of the academic staff agreed that the effect was positive.

Table 3.3: Impact of Information Technology on Saudi Society (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
There is a clear IT influence on Saudi society.	23	95.8	1	4.2	-	-	-	-

In more detail, the findings in Table 3.3 showed that twenty-three interviewees (or 95.8%) believed that information technology and the Internet have a clear influence on Saudi society. A lot of points appeared in the interviews, which, in general emphasized that the Internet and new technology, despite being relatively recent, have affected all aspects of Saudi society.

However, according to the Table 3.4 it can be seen that almost one third of respondents of the questionnaire (33.9%) thought that the Internet isolates people by inhibiting normal social interactions among users, while (37%) of academic staff were undecided.

Table 3.4: Perception of the Impact of Information Technology on Saudi Society (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
The Internet isolates people by inhibiting normal social interactions among users.	7	3.1	59	26.0	84	37.0	66	29.1	11	4.8

(*) Frequency

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Generally speaking, these findings are indicative of the academic staff's understanding and awareness of the positive and negative impacts of information technology on Saudi society. Interviewees commented further as follows:

A female academic in a Girls' College has deep concerns:

> *"On the one hand, yes there is effect, very much, but unfortunately we take the bad sides of technology, especially in areas such as mobile phones, computers and the Internet. If you look at the chatting room in the western world, people discuss serious matters and problems, but if you enter the chat rooms in the Arab world, you will find that it is full of nothing."*

She added;

> *"On the other hand, I mean look at the Saudi society and how it opens into the outside world, while fifteen years back, our worries and sorrows are home ones and we have no idea of the outside world except what we hear from the radio. Now there is a change in our huge openness to the world and in our understanding of incidents that happen in the outside world, much more than in the previous years."*

Likewise, an interviewee agreed:

> *"Obvious changes have appeared in the society, for example, we see now satellite channels and the Internet during the last five years. All these have contributed in Americanizing the social habits of Saudi citizens. Unfortunately, the issue of moral deterioration, which we see now, has become higher than before, due perhaps to the satellite channels or the access to certain sites in the Internet."*

On the other hand, he thought:

> *"There is a positive effect. For example, it is easy to attain data and knowledge through new technology."*

Moreover, one of the academic staff in a College of Engineering pointed out that the effect has reached even the Bedouin in the desert. He said:

> *"No doubt there is a boom in the use of technology, which could be unorganized or uncontrolled. The Bedouin in the desert has no electricity, but he has satellite channels, which are considered a big leap. The Internet has created a sort of big openness in society whether the effect be positive or negative."*

Recently, as a result of the importance of the media and new technology, the Saudi authorities have realized that it is necessary to exploit the advance of technology in order to keep pace with the knowledge explosion and global changes. A medical doctor at King Saud University highlighted the affect of IT on Saudi organizations:

> *"Yes, the technology has affected the speed of fulfilling transaction in government organizations. We noticed that the development of technology in government organizations, establishments and companies, began to make life easier. I remember in the past, people found difficulty when trying to get a new passport, or book for an air ticket, because computers were not used. Now it is much more easier, time is saved, things are more organized, due to the use of modern technology."*

The Saudi market for computers was estimated to be $300 million in 2000. The increase in computer sales resulted from using the Internet, which began in 1999 in Saudi Arabia. Moreover, "By the end of 2001 Saudi Telecom (STC) Infrastructure was expected to support some three million Internet users" (Kashkoul and Ba-lsa 2002, online, 1).

Most Saudi academic staff have a positive attitude toward the impact of IT on Saudi society. But, also, most of the respondents disagreed that Saudi people and organizations are developing their use of the Internet as quickly as they need to.

One colleague noted a deep underlying problem related to the conservatism of Saudi society:

> *"In Saudi Arabia we are very slow in grasping new technologies, maybe everywhere people are very slow in taking in new technologies. People are reluctant to let go of their old ways. They are reluctant to change. Only on an individual level they try to change, but there are genuine efforts made to prove that we have technology. We lack serious intent to adopt technology in society."*

From the Institute of Public Administration a female doctor saw the effect of IT on Saudi society from a different angle. She said:

> *"As individuals, a community, there is some effect, but as organizations, there is no obvious change. Only some organizations like the Institute of Public Administration, which is the only place that adopts a policy and strategy and imposes advanced technology on all, starting from the receptionist to the copying employee. All know how to use the computer. All tasks are transferred to computer tasks, such as entering absentee's data, programme designing, degrees records; all are done according to a general system. The institute also provided all the facilities such as the e-mail, the Internet."*

The Institute of Public Administration with close links to the Finance Ministry, is well resourced and responsible for all public sector administrative training. Unlike universities, it is not an academic institution. For this reason its staff work to tight schedules, clear targets and programmes. The Institute is a tightly managed organization in which staff know clearly what is expected of them. They have to work with a wide range of employees and to do so efficiently if training programmes are to be successful.

This all supports the conclusions of Jefferies and Hussain (1998) who argue that to exploit and invest in the new technology and bring the Internet into instruction processes, there have to be some changes in the culture of both the academics and learners in order to keep pace with other changes such as curricula changes and changes in teaching methods. Zakaria (2001:2) also agrees that new changes in syllabuses require changes in society to make sure that learners and trainees are able to apply what they obtain from the Internet-based course in their work. Such cultural changes touch all aspects of Saudi society. For example, according to Sami, a Saudi writer (1999:online), the Internet has helped Saudi women to extend their liberty. She added that they can discover the world through it and see the latest events and innovations in all aspects of life. As a result of using the Internet the number of Saudi women who enter the Saudi work force has increased. Nevertheless, almost a third of the questionnaire respondents (33.9%) thought that the Internet isolates people by inhibiting normal social interactions among users.

Some of respondents thought new technology such as satellite channels and the Internet has contributed in Americanizing the social habits of Saudi citizens. I do believe that this is very typical among Saudis, not just among those who work in the universities. There is, in this conservative culture, a balance to be struck between open access to the Internet for the opportunities it brings in knowledge or commerce and the serious danger, in Saudi thinking, of moral decline as a result of non-Islamic ideas and values.

Overall, Saudi Arabia is a fast changing society. The changes of the past fifteen years have been profound. The country is now much more open to outside influences than in the past. Saudi people – especially the educated and those with access to the Internet – are much more aware than members of their parents' generation of developments outside the country. Attitudes, values and expectations are changing and there is a political debate about what the values of the country should be. IT plays a key role in these changes.

Bachman (2001:1) stated that Saudi society and the government have attempted to avoid globalization on the cultural level but have supported globalization on an economic level. The reason why they oppose cultural globalization is because it is threatening to their faith and weakens their morality.

Generally speaking, the new technology and communication links the country together. It makes connections between Saudi cities and towns and Saudi Arabia and other countries all over the world easier.

3.5 The labour force and its training in Saudi Arabia

In the 1970s and 1980s the Saudi economy grew rapidly as a result of increasing oil revenues. However, labour force development is considered to be necessary for further growth. It is a primary and essential factor in the development process and in the transformation and advancement of societies. Therefore, one of the main goals of the seven five-year development plans published in Saudi Arabia since 1970, is developing human resources through education and training. Within this goal, it is

clear that the main duties of higher education in Saudi Arabia is to develop manpower to deal with the economic needs of development.

In spite of its a great potential, the Kingdom of Saudi Arabia faces a big obstacle, related to the labour force. There is a shortage of Saudi manpower, particularly in the modern sectors of the economy such as manufacturing and construction. In the main, Saudi people are working in the traditional and services sectors. To solve this problem the Saudi government imports foreign workers. Saudi Arabia has encountered difficulty in keeping pace with the demand for manpower, particularly with the limited participation of women.

During the second development plan, foreign workers were more than 50% of the total in employment. In fact, it has become one of the main characteristics of the Saudi labour force. This is because Saudi Arabia was a new country and most of its people were uneducated. At the same time, the government has strived to build the physical infrastructure, which required a massive labour force. With the passage of time, the Saudi national labour force has grown very fast; according to Shabrawishi (1982:90) "Registering an annual rate of increase of 3.8 percent for the period 1970 to 1975, and as high as 7.2 percent per year for the period 1975 to 1980. In both cases this is higher than the average rate of increase in developing countries."

Table 3.5 shows that the total number in employment, whether Saudis or non-Saudis, has increased sharply in the period between 1970 and 1995. For instance, the size of the labour force in 1975 was 1,546,100 and in 1985 it was 2,626,200, while in 1995 the number of economically active was more than double that, reaching a figure of 5,985,300 of which more than 60% were non-Saudis.

Table 3.5: Growth of the Saudi Labour Force 1970-1995 (Figures in Thousands)

Nationality	1970	1975	1980	1985	1990	1995
Saudis	993.4	1,192.2	1518.0	1557.4	2160.7	2357.1
Non-Saudis	172.0	353.9	812.6	1068.8	2059.8	3628.2
Total	1,165.4	1, 546.1	2330,6	2626.2	4220.5	5985.3
% Of non-Saudi	14.8%	22.9%	34.9%	40.7%	48.8%	60.6%

Source: Al-Shahrany, (1998:102-143)

A lot of Saudi experts believe that the need for foreign manpower is problemmatical. For instance, Al-Moammar (1983 cited in Al-Towaijri, 1992:7) stated "The crux of the manpower dilemma is that Saudi Arabia had to rely disproportionately on foreign workers to carry out its development with the likelihood that these foreign workers will continue to be needed into the quite distant future"

Al-Rasheed (1994:20) points out that the state needs foreign manpower to supplement the native labour force in different sectors because "About half of the population is considered being unavailable for inclusion as part of labour force (that is, the women of Saudi Arabia due to religious/cultural reasons)."

Generally speaking, in recent years the objective of the current development plans is to reduce the number of foreign workers by replacing them with Saudis, a process which is called Saudization. According to the Seventh Five-Year Development Plan "With the acceleration of Saudization policies and intensification of training programs, the number of non-Saudis workers is expected to decline ... at 2.57 percent annually during the seventh plan." Which means the number of non-Saudis should decrease from 4,003,000 in 1999 to 3,514,700 in 2004 (Ministry of Planning, 2000a:77-78).

The above arguments indicate the structure of the Saudi Arabian labour force. So how could the labour force develop in Saudi Arabia? This will be discussed in the coming section.

3.5.1 Labour force in the Sixth Development Plan

One of the important objectives of the Sixth Development Plan (1995-2000) is "To develop human resource and continually ensure an increasing supply of manpower, upgrading its efficiency sufficiently to meet the requirements of the national economy, and replacing non-Saudi manpower with Saudis." But the sixth plan "was implemented in an environment of rapidly changing conditions in the international economy, which presented great challenges for the national economy and affected some key plan targets (Ministry of Planning, 2000a: 59)." Declining oil price in 1997

led to decreases in oil revenues that effected all aspects of life in Saudi Arabia, particularly in the labour force.

Table 3.6: Saudi Arabian Labour Force by Nationality in the Sixth Development Plan (1995-2000) (Figures in Thousands)

Year / Nationality	1995	2000	Rate of Growth
Saudis	2544.8	3172.9	4.5
Non-Saudis	3945.1	4003.4	0.3
Total	6489.9	7176.3	2.0

Source: Ministry of Planning, (1995). Sixth Development Plan 1995-2000: Riyadh, Ministry of Planning Press (cited in Ministry of Planning, Seventh Development Plan, 2000b: 62).

According to Table 3.6, even despite the difficulties that faced the Saudi economy, manpower grew during the period of the plan at an annual rate of about 2 percent. 686,400 have entered the labour market. The low price of oil played a big role in constraining increases in the numbers of employees.

In the future the seventh development plan (2000-2004) will attempt to deal with these challenges. The objectives of labour force development are as follow:

- "To provide more job opportunities for Saudi nationals through appointment or replacement in all occupations and economic sectors, particularly in the private sector;
- To rationalize the recruitment of non-Saudi workers and to confine employment in some occupations and sectors to Saudi nationals only;
- To increase job opportunities for women and increase their participation in the labour market in conformity with Islamic Shari'a;
- To improve the productivity of the Saudi labour force and upgrade its quality to keep pace with technological development;
- To achieve more matching between the outputs of the education and training systems and the requirements of the labour force;
- To continue achieving integration in the field of manpower planning and development (Ministry of Planning, 2000b:159)."

Table 3.7: Saudi Arabian Labour Force by Nationality in the Seventh Development Plan (2000-2004) (Figures in Thousands)

Year / Nationality	2000	2004	Rate of Growth
Saudis	3172.9	3990.2	4.69
Non-Saudis	4003.4	3514.7	2.57
Total	7176.3	7504.9	.90

Source: Ministry of Planning, (2000b). Seventh Development Plan 2000-2004: Riyadh, Ministry of Planning Press.

As regards to the new job opportunities, Table 3.7 shows that the planners expected in the period of the seventh plan that the government would provide about 328,600 new job opportunities to cover the expansion of the development process. They also anticipate the total size of the labour force will grow from 7,176,300 (in the beginning of this plan) to 7,504,900 by the end of the seventh development plan.

In general, the Saudi government attempts to improve the Saudi labour force through several policies. These policies deal with the educational system, training and research. The most significant policies are as follows:

1- Expansion and enhancement of quality in the general and technical education system;
2- Providing sufficient educational opportunities for all schools and levels;
3- Ensuring that labour force training programmes are keeping pace with real economic needs;
4- Encouraging the private sector to hire national manpower through the provision of new job chances for them;
5- The continuation of Saudization in both public and private sectors;
6- Improving national manpower productivity (Ministry of Planning, 2000b: 165).

To cope with the problem of being too dependent on foreign labour, the government has concentrated on trying to improve the educational system and training programmes to produce skilled national manpower. The number of student in higher institutions has increased sharply due to government financial support (Al-Shahrany, 1998:147).

3.5.2 Manpower training in Saudi Arabia

Before 1980, Saudi Arabia was suffering from a lack of skilled citizens, like most of the developing countries. As a result of the important role that training plays in public and private sectors of the Saudi economy, the Saudi government has established many training institutions such as the Institute of Public Administration (IPA), Vocational Training Centres and The General Organization for Technical Education and Vocational Training (GOTEVT).

The most important objectives of training in Saudi Arabia are as follows:

1- The preparation of employees to be able to work in public sector;
2- Improvement of the performance level of employees;
3- Training of employees to follow new styles in work or use new technology.

Nowadays almost all government agencies carry out some type of training programmes. But they cannot provide training programmes to the extent of those provided through the Institute of Public Administration. The Institute of Public Administration and the General Organization for Technical Education and Vocational Training are considered to be the main government training agencies in Saudi Arabia. It is important to bring this institution into view in this study because many university academics believe it is this body, rather than universities themselves, that has responsibility for manpower training and development in the kingdom.

3.6 Institute of Public Administration

Global interest in studying and developing administration on a large scale emerged after World War Two. The interest was contemporary with the phenomenon of establishing specialized institutes that would undertake providing training programmes, research, and consultation. The interest was translated in the recommendations of the Social-Economic Council of the United Nations, which focused on the need to develop public administration in developing countries as a condition to achieve development programmes (Institute of Public Administration 1409, 1409:1).

In order for employees to perform their assigned duties, it is necessary to organize and conduct training courses for various jobs levels of government organizations to promote the efficiency of employees and prepare them to shoulder their responsibilities and exercise their authorities, in a manner that achieves continual progress for the organization and supports the national economy.

In 1961 the government assigned this task to the Institute of Public Administration in Riyadh, which means employees' training in the public sector in Saudi Arabia began with the establishment of this Institute. Training is considered to be the best way to replace non-Saudi skilled workers by skilled Saudis. It is also the only way to keep pace with the explosion of knowledge and technological advances. The major reason for establishing the IPA was to avoid sending employees abroad to get training. It has three branches – the Eastern Province Branch in Dammam, the Jeddah Branch and the Women's Branch in Riyadh (Institute of Public Administration, 1401:17).

Regarding the current situation in IPA in terms of training, one decision maker from IPA said for instance:

> *"The current situation in the IPA as regards training programmes for public sector employees, is based on the suggestions of the IPA specialists of certain programmes designed and developed in the Institute. Then they are offered to various government organizations through an annual training plan."*

The point being made is that in Saudi Arabia training opportunities are provided on a supply-led rather than a demand-led basis.

3.6.1 Objectives of the Institute

The main purpose of the Institute, as expressed in item (2) of its regulations, "Is to promote the efficiency of civil servants and to qualify them theoretically and practically to be able to assume their responsibilities in way that will promote the level of administration and foster the development of the national economy. The Institute will also participate in government administrative organization, render it advice on administrative problems requested by government ministries, carry out administrative research projects, and undertake the responsibility of fostering cultural relations in the field of public administration."(Institute of Public Administration,

1970:1). Al-Saif (1989:39) states that the main task of the IPA is to promote the efficiency of public sector employees in different fields of specialization.

Generally speaking, the most important objectives of the Institute can be summarized as follows:

1. Improving administration in the kingdom and raising government employees standard of efficiency in order to raise productivity in a manner that supports the basics of the national economy;
2. Developing and promoting the efficiency of government systems by providing the required consultation services and conducting studies of administrative reform;
3. Enriching Arab administration thorough administrative and organizational research;
4. Providing documentary services to researchers making use of administration documents in the kingdom; (Institute of Public Administration, 1401:18)
5. Training officials of other Arab countries to qualify them to conduct their duties in an efficient way (Al-Tawail, 1974:98).

There are many departments, bureaus, and schools (government agencies or private) that are responsible for employees' training. They have approximately the same objectives, which means they work side by side with Institute of Public Administration in Saudi Arabia. In other words, the Institute of Public Administration is not the only agency, which strives to improve the employees' skills and knowledge in order to attain government goals and to keep pace with modernization.

On the other hand, because the Institute of Public Administration provides most of the training programmes, the government has prohibited all the government agencies from establishing similar or duplicate training programmes for their employees (Jishi, 1972:12).

However, Al-Sabaan (1985:170) shows that, for the 1980s, the IPA's activities were focused on the workers involved in government. But the IPA now provides its programmes for Saudi and non-Saudi employees. Moreover, its activities are related

to in-service training programmes covering 15 sectors such as public administration, training and educational programmes, health administration programmes, computer programmes and legal courses. In 1999 the total number of graduates on in-service training programmes was 11,564, while the total number of graduate on in-service special training was 722. The total number of students on pre-service preparatory programmes was 1018 (Ministry of Planning, 1999:91-98). Table 3.8 casts light on the growth of graduates in different programmes of the Institute of Public Administration in the period between 1970- 2000:

Table 3.8: The Growth of Graduates on Different Programmes of the Institute of Public Administration in the Period between 1970- 2000:

Year	In-service training	Pre-service training	Special training	English language	Higher management	Total
1969-70	528	-	43	316	110	997
1974-75	899	165	214	166	94	1538
1979-80	2306	188	295	533	286	3608
1984-85	3932	610	679	1941	607	7769
1985-86	3964	751	427	1064	503	6709
1986-87	5478	1226	195	965	482	8346
1987-88	6936	731	352	1530	838	10387
1988-89	8729	765	369	1363	459	11685
1989-90	9178	365	450	903	1753	12649
1990-91	8769	1512	407	166	1064	11918
1991-92*	10500	992	505	-	494	12491
1992-93	11737	1411	542	-	1524	15214
1993-94	10466	2715	628	-	1543	15352
1994-95	10765	2604	531	-	1333	15233
1995-96	11264	3225	756	-	1513	16758
1996-97	11384	2308	791	-	1514	15997
1997-98	11581	2688	899	-	2118	17286
1998-99	13230	2498	905	-	2481	19114
1999-00	11961	2498	1059	-	3946	19464

*** From 1990-91 pre-service training include – English Language Program.**

Source: Ministry of Planning, (2000a: 326). Achievements of the Development Plans Facts & Figures 1970-2000: 18th Issue, Saudi Arabia, Ministry of Planning Press.

3.6.2 Types of training

The section responsible for training has witnessed a substantial development since the establishment of the Institute. The training programmes provided by the Institute could be categorized into the following:

3.6.2.1 Higher administration development programmes

The higher administration development programmes aim at promoting the capabilities of higher administration employees, in order to perform their duties in a better way, through expanding their thinking, broadening their minds and sharpening their skills to solve the problems that face them in the course of their work (Al-Saif, 1989:61).

The Institute of Public Administration (1401:35) points out that different methods are used in providing these programmes, according to the goals of each individual programme, such as lectures, symposia, seminars, conferences and weekly cultural meetings.

Table 3.9: The Number of Participants in Applied Workshops during 2001

Place	Number of Applied Workshops	Number of Benefiting Institutions	Number of Participants
Headquarters in Riyadh	**39**	**188**	**825**
Dammam	**16**	**53**	**291**
Jeddah	**11**	**56**	**202**
Women's Branch (Riyadh)	**10**	**22**	**287**
Total	**76**	**308**	**1501**

Source: http://www.ipa.edu.sa/eng/eng900.asp

Table 3.9 shows the number of higher administration employees who attended these activities (1501), the number of workshops held and the number of benefiting institutions, during the training year 2001.

3.6.2.2 Special training programmes

Special programmes are designed specifically for particular organizations. The Institute, represented by the administration of the special programmes, tries to fulfill the training needs required by some government organizations, that due to their nature of work, require particular programmes. These have limited application and have to be developed on demand by the IPA (Institute of Public Administration, 1413:13).

Table 3.10: The Distribution of Trainees in Special Training Programmes According to Place During 2001

Place	Number of Programmes	Trainees Admitted	Enrolled	Passed	%
Headquarters in Riyadh	24	576	516	516	54.4%
Dammam	8	223	210	210	22.1%
Jeddah	9	230	209	209	22.0%
Women's Branch (Riyadh)	1	27	14	14	1.5%
Total	28	1056	949	949	100.0%

Source: http://www.ipa.edu.sa/eng/eng800.asp

Table 3.10 shows that the number of employees who enrolled on the special training programmes in Headquarters and its branches was 949 trainees. In addition, we can also see the number of special programmes and number of trainees who passed during the training year 2001.

3.6.2.3 In-service training programmes for employees

In-service training is the most important type of training because it has a direct effect on productivity in any organizations or corporations. This is clear for all countries and for both public and private sectors. It grants trainees what they need and earnings increase for both sectors, particularly the private sector (Layard, Mayhew and Owen, 1994:237). If organizations or companies are to be effective, they should make in-service training part of their daily life, covering subjects and themes which are required by them or needed by trainees.

Table 3.11: The Number of In-service Training Programmes and the Number of Trainees During2001

Place	Number of Programmes	Trainees Admitted	Number of Enrolled	Number of Passed	%
Headquarters in Riyadh	111	9357	8149	8099	60.6%
Dammam	40	2703	2358	2323	17.4%
Jeddah	33	2691	2228	2220	16.6%
Women's Branch	29	930	731	727	5.4%
Total	213	15681	13466	13369	100.0%

Source: http://www.ipa.edu.sa/eng/eng500.asp

Table 3.11 shows the number of employees who enrolled in in-service training programmes in Headquarters and its branches – 13466 employees. It can be seen that more than 60% of the trainees enrolled in the headquarters in Riyadh. In addition, we can also see the percentage of women who enrolled in these programmes is just 5.4%. This means that there are not the training opportunities for them as there are for men. Internet-based training can offer Saudi females more training opportunities.

3.6.2.4 Pre-service training (preparatory programmes)

Pre-service training is designed for people who are preparing to start their new jobs. Pre-employment training programmes at the Institute are the programmes which attract the university and high school students, arts or science, who are newly graduated and ready to enter service in the private sector or government organizations (Institute of Public Administration, 1415:13).

Pre-service programmes in the IPA comprise various majors, for instance Hospital Administration, Executive Secretary, Computing, Marketing, Accounting and Law. The period of these programmes is between six months to two and half years.

Table 3.12: The Number of Students on Pre-service Programmes in the Headquarters and Branches 2001

Place	Number of Programmes	Students Admitted	Number of Enrolled	Number of Passed (Graduates)	%
Headquarters in Riyadh	17	930	681	664	62.1%
Dammam	5	176	129	121	11.3%
Jeddah	4	174	111	111	10.4%
Women's Branch	6	257	176	173	16.2%
Total	32	1537	1097	1069	100.0%

Source: http://www.ipa.edu.sa/eng/eng600.asp

Table 3.12 shows the number of students who graduated from high school and enrolled in the pre-service training programmes in the Institute in different cities. The number of students who enrolled during 2001 was 1097 of which 1069 graduated. It is worth mentioning that students who wish to continue their education in the Institute of Public of Administration increases yearly. This relates to the difficulties

that face high school graduates, which prevent them from enrolling in universities and colleges. They believe they can find job opportunities in both public and private sectors by enrolling in the Institute's courses.

The Institute of Public Administration has played and still plays an important role in Saudi society in terms of improving employees' skills and increasing their productivity. If the Institute adopts Internet-based training, it will help overcome the shortage of training places and will help government employees who live in other cities to enroll in training programmes.

Although the Institution of Public Administrations has achieved much for employees of the public sector, it is clearly not enough when we compare the huge number of employees in the sector with the number of trainees that enrolled on courses in the IPA. However, some of the trainees in the IPA did not take training seriously. One of the IPA's decision makers made this point:

> *"A large number of those who attend training courses aim at getting grades and points to enable them to get promotion. Another group, you feel, has come really to gain the benefits of the training, another group wanted just to get out of the offices routine and look for a change. We, in the Institute, have regulations that may deny the trainee from attending the programme if his attendance is poor. We have a controlling process in the Institute for such behavior. But it is natural to find some degree of variation in abilities and interests, and the percentage of the trainees who want to develop their skills is between 40-60%."*

In order to make training available for those employees in different organizations and help them to be independent, the government has to adopt e-learning in in-service training. From last year the IPA began to make changes in the content of courses in all levels of training. At the same time, according to a decision maker who provided feedback, the IPA is ready to use new technology in training courses. As he explained:

> *"The IPA prepared many new programmes last year. Each session is designed with the content all in an electronic format. So I may say we are ready for the e-training and learning."*

3.7 General Organization for Technical Education and Vocational Training (GOTEVT)

The General Organization for Technical Education and Vocational Training was established in 1980. It is responsible for all subjects related to technical education in industry, agriculture and commerce and all subjects related to vocational training, such as adults seeking to upgrade their vocational qualifications and people in preparatory stages of occupational training (Al-Rasheed, 1994:36). In addition, it is responsible for changing some of the negative attitudes of Saudi manpower towards vocational education.

GOTEVT provides four types of training. These are as follows:

1- Pre-vocational training that accepts young people between 14-17 years old who did not continue their education. The duration of this kind of training is ten months, six hours daily and includes, for example, general mechanics, car mechanics and electricity;
2- Vocational training for adults between 17-45 years old who have completed at least primary school. The duration of the programme is between one and one and a half year, eight hours daily and includes, for example, electronics and auto body repair;
3- In-service training in both public and private sectors;
4- Training of vocational teachers (Al-Assaf, 1987:62).

Table 3.13: The Growth of Graduates of Training Programs in GOTEVT in 1990-1995

Type of Training	1990	1995	Growth
Vocation Training	6,932	18,156	161.9
Instructor Training	75	90	20.0
In-Service Training	280	280	0.0

Source: Ministry of Planning, (1990). Fifth Development Plan 1990-1995: Riyadh, Ministry of Planning (Cited in Al-Shahrany, 1998:142).

Table 3.13 shows the growth of graduates of training programmes provided by the General Organization for Technical Education and Vocational Training in 1990-1995. It can be seen from the table that vocation training had increased three times by 1995. In other words, the growth rate has reached 161.9 percent. According to the Ministry of Planning (2000a:166), the number of students enrolled in vocational

training in 1970 was 578 while in 2000 it was 12,387. In other words, the number of students increased twenty-one fold in 2000. This suggests that the attitudes of Saudi people towards vocational training have started to change.

On the other hand, Sheras has noted that vocational training in Saudi Arabia is still suffering from low enrolment and mismatches between the expectations of some of the graduates and the positions that they were to fill after graduation (1994:22).

3.8 Saudi Arabia and the modernization

Modernization of the economy and development in the society is an important goal of the Saudi Arabian government.

3.8.1 Industrialization and Saudization

Due to increases in oil revenues the Saudi government has over the years transformed a Bedouin society to a modern society. Industrialization is considered to be the backbone of modernization. Even though the state depends on oil exports, it has embarked on establishing industrial units in order to diversify production in the public and private sectors. In addition, it strives to exploit minerals resources such as gold, iron, and copper.

The youth explosion in Saudi Arabia provides the Saudi government with a big challenge, which is to find job opportunities for them. In order to solve this problem and get rid of unemployment, the government has followed several procedures, for example, Saudization in all sectors. Cordesman (2001b:32) has explained "Saudization is the government's attempt to decrease the number of foreigners working in certain occupations and to replace them with Saudi workers. To accomplish this goal, the government has taken several long-term steps, most notably limiting employment in certain fields to citizens, prohibiting renewal of existing contracts, and requiring that 5 percent of the work force in private sector companies be filled by citizen workers. The government also requires firms to increase the proportion of citizen workers by 5 percent each year".

But, as Champion points out, Saudization has faced a difficulty in that approximately 27.9 % of new labour market applicants in Saudi Arabia in the period from 1995 to 2000 were uneducated. This means they have only completed elementary school or have withdrawn from vocational training programmes (1999:53).

In 1997, another government strategy was to offer an amnesty to foreign workers who were in the country without a visa, in other words illegal employees. As a result of this offer more than 500,000 illegal foreign workers have left the state.

Saudization in general has had a limited effect. The private sector does not follow the government orders to replace Saudi workers by foreign workers. Furthermore, the government still issues work visas for foreign employees.

As a result of improvements in higher education and training, Saudi manpower has achieved a high level of skills, especially with reference to the need for increased Saudization. But there is still lack of labour in some areas. If Saudi people would develop positive attitudes toward low status careers (e.g. taxi driver) that would help to reduce the number of foreign workers and help to overcome the unemployment problem that young Saudi people encounter.

3.8.2 Communication and technology revolution

Saudi Arabia has acquired technology relatively recently. But it strives to import the latest modern equipment from the developed countries in order to develop all economic and social sectors through it. This comes as a result of the government's desire to invest wealth from natural resources and promote manufacturing through the five-year development plans.

From the beginning, Saudi five year development plans focused on improvements in the technological programme and encouraged Saudi people to deal with it. For example, the main aim of these plans is:

1. To stimulate the use of new communication and information technologies in all economic and social sectors;

2. To built a large national scientific research and technology base, which will improve and reinforce national scientific and technical manpower.

King Abdulaziz City for Science and Technology (KACST), which was established in 1986, is in charge of technology in the state. One of the important tasks is to transfer new technology to encourage economic, cultural and social development in Saudi Arabia (Al-Showaye, 1999: 69).

Burkhart (Allied Communications Engineering, Fairfax, VA) notes that people in Saudi Arabia have changed as a result of technological advances and the knowledge explosion. Everyone can see that when they visit Saudi Arabia. They notice that the younger generation "Tends to be more technically educated than its elders, more cosmopolitan, and more open to new ideas and more aware of the existence of alternative forms and ideas internationally." (1998:online).

For example, the Saudi health sector follows the new changes in communications and has started to use electronic medicine. It has many advanced hospitals, such as the King Faisal Specialist Hospital and Research Centre (KFSHRC), the Web-server of which is one of the best in the medical sector.

Moreover, it is considered to be one of the best-equipped hospitals worldwide. High-tech-medicine and specialists from all over the world aim to reduce the need for medical treatment abroad. The first International E-Heath Association conference took place in May 2001 in Jeddah City attended by lots of specialists and medical doctors (Parker, Agence France – Presse, 2001:online). This conference linked the most important cities in Saudi Arabia such as Riyadh, Dammam, Qassim and the Holy City of Medinah to the hospital in Jeddah. Parker noted that in the next two years the Saudi health sector would complete videoconference links nationwide to all hospitals in Saudi Arabia to treat Saudi patients locally. This kind of link is very important to most sectors in Saudi Arabia, for instance the educational system, the military system and other would adopt such communication arrangements if the government provided the financial support.

3.8.3 The Internet in Saudi Arabia

In 1994, Saudi Arabia started to link with the Internet but to restrict its use to government institutions and universities. At the same time, some Saudi citizens could use the Internet through overseas Internet Services Providers (ISPs) whether from Bahrain or the USA. The charge, however, was very expensive, for example $1.70-$2.10 per minute.

The Saudi government allowed Saudi citizens and residents a connection to the Internet in 1997 through foreign ISPs. At the beginning of 1999 people in Saudi Arabia began to access the Internet through local service providers. The Internet Service Unit (ISU), which is one of the important departments in the King Abdulaziz City for Science and Technology (KACST), is responsible for providing the Internet to the people in the Kingdom of Saudi Arabia (King Abdulaziz City for Science and Technology, 2000a: 11).

3.8.3.1 Internet services unit (ISU)

King Abdulaziz City of Science and Technology is a Saudi government organization. The administration and supervision of all research projects and different scientific fields are its main responsibilities. In addition, it has been driving force behind Saudi Arabia's technological development since its establishment in 1978.

The Internet Service Unit is a department in KACST, which was established in 1998. Internet users in Saudi society are being provided Internet access by this unit. In accordance with KACST the main responsibilities of ISU were as follows:

- "Qualifying and Licensing Internet Service Providers in KSA;
- Connecting ISPs and universities in KSA to the International Internet;
- Managing and operating the Network Operation Center (ISU NOC) including hardware and software necessary for connecting to the Internet;
- Managing and operating the Network Information Center (Saudi NIC) including domain name registration and IP number allocation;

- Preparation of regulations and policies to govern the use of Internet in KSA in coordination with other government agencies;
- Establishing a network security center in cooperation with other government agencies." (Al-Zomman, 2003: 20-22)

3.8.3.2 The Saudi Internet regulations and policies

The Saudi government has created firewalls to avoid pornography and political websites, which are critical of the Saudi political system. Sami reports that many countries in the Middle East have regulations to control Internet sites. Bahrain hired computer specialists from other countries to block political sites. In the United Arab Emirates, the government employed a big company from the United States to close off pornography sites (1999:online).

In short, most governments are trying to strike a balance between keenness to harvest the economic advantages of World Wide Web access and the need to maintain control over the materials, which are available through it.

The ISU prepares Internet regulations and policies in conjunction with some of the government institutions in the state, such as the Ministry of the Interior and the Ministry of Commerce (Internet Service Unit, 2000:online).

The Saudi government added new regulations for Internet use recently including one to prevent young people under 18 years old from entering Internet cafés except when accompanied by their fathers (Agence France Presse, 2001:online).

3.8.3.3 The number of Saudi Internet users

Day by day the number of Saudi Internet users is continuously increasing. Ajeeb.com (Arabic-English Web-portal) carried out a study, which revealed the number of the Internet users in Middle East countries in 2001(2001: online). Table 3.14 shows the results:

Table 3.14: The Percentage of Total Internet Users in Arab Countries

Country	Total Users	Percentage of Population
United Arab Emirates	660.000	24.4
Saudi Arabia	570.000	2.6
Egypt	560.000	0.8
Tunisia	280.000	2.9
Lebanon	262.000	6.6
Morocco	220.000	0.7
Jordan	210.000	4.6
Algeria	180.000	0.6
Kuwait	165.000	8.2
Bahrain	105.000	16.7
Qatar	75.000	10.3
Palestine	60.000	3.5
Syria	32.000	0.2
Sudan	28.000	0.1
Libya	20.000	0.4
Yemen	14.000	0.1

Source: Ajeeb, 2001:online

From the table it can be seen that in spite of the fact that the Saudi government introduced the Internet service for the public only about two years ago, the number of Internet users has reached almost 570.000 (about 2.6% the of population) (Ajeeb, 2001:online). In addition, the number of Internet subscribers is approximately 200,000.

Regarding the characteristics of Saudi Internet users, the ISU in KACST carried out a survey in 2000, which covered individuals. The important results of the study are that 94.22% have home computers, 58% through Bahrain and 24% have local Internet providers; 27% spent more than one hour per day on the Internet; 56% paid for Internet access by themselves; 69% are between 20-35 years old, and 81% have either a degree or higher degree (King Abdulaziz City for Science and Technology, 2000b:online). The evidence seems to be that Internet use is high among the educated.

Table 3.15:Use of the Internet by Saudi People and Organizations (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
Saudi people and organizations are developing their use of the Internet as quickly as they need to.	1	4.2	4	16.7	18	75	1	4.2

The number of Saudi Internet users is continuously increasing. But the findings of this study in Table 3.15 revealed that 75% of interviewees disagreed that Saudi people and organizations are developing their use of the Internet as quickly as they need to. Several view were expressed by academic staff: a male academic stated:

> *"The answer is in two parts: firstly, the infrastructure of the Internet services and computers is still not of the required standard regarding the government. Even the state is working hard to provide these services. We heard that the Ministry of Finance has separate items for modern technology and automation in the government sector, which will serve the electronic government in the future. But the awareness of employees in the public sector and the private sector is still low in a relative degree."*

One of the faculty members connected it to the characteristics of individuals:

> *"The individual in our society has a negative disposition; with the exception of some individuals who show initiative, and will develop themselves, but these are few. I don't think there are people who endeavor to develop themselves without the existence of financial incentives or some sort of forcing or pressure on the side of the administration."*

Some respondents also pointed out limitations:

> *"I don't think technology is a problem in itself as it is available to everyone in the Saudi Arabia. But there is slowness in the communication factor. However, the real problem is in the general understanding and awareness of society. There should be some synchronization, which is well-known among the specialists, but sometimes there is a delay in social awareness. As regards this, social awareness it is still in the beginning, even though there are institutes that hold training courses, and as a coincidence, last week I delivered a lecture at King Faisal Center about the Electronic Government. It was amazing; I found the employees welcoming and understanding; and government organizations are attempting to re-habilitate their employees but the whole thing is progressing slowly."*

A female academic in the Girls' College felt very angry, because she thought training and development of employees in girls' colleges is missing. She disclosed that

> *"It is sad to say that regarding the Internet there is a big reservation about using it by the Girls Education Presidency, despite much interest from the secretaries and the academic staff to use this powerful machine and communicate with other colleges. Despite all this eagerness, there is a conservative attitude in the administration and we do not know the reason."*

Another academic, who was not sure, stated that:

> *"There are two generations: the older generation that sees the necessity of holding to the traditional point of view. Another generation mostly of young people who use of it as much as possible. They found out that it is a*

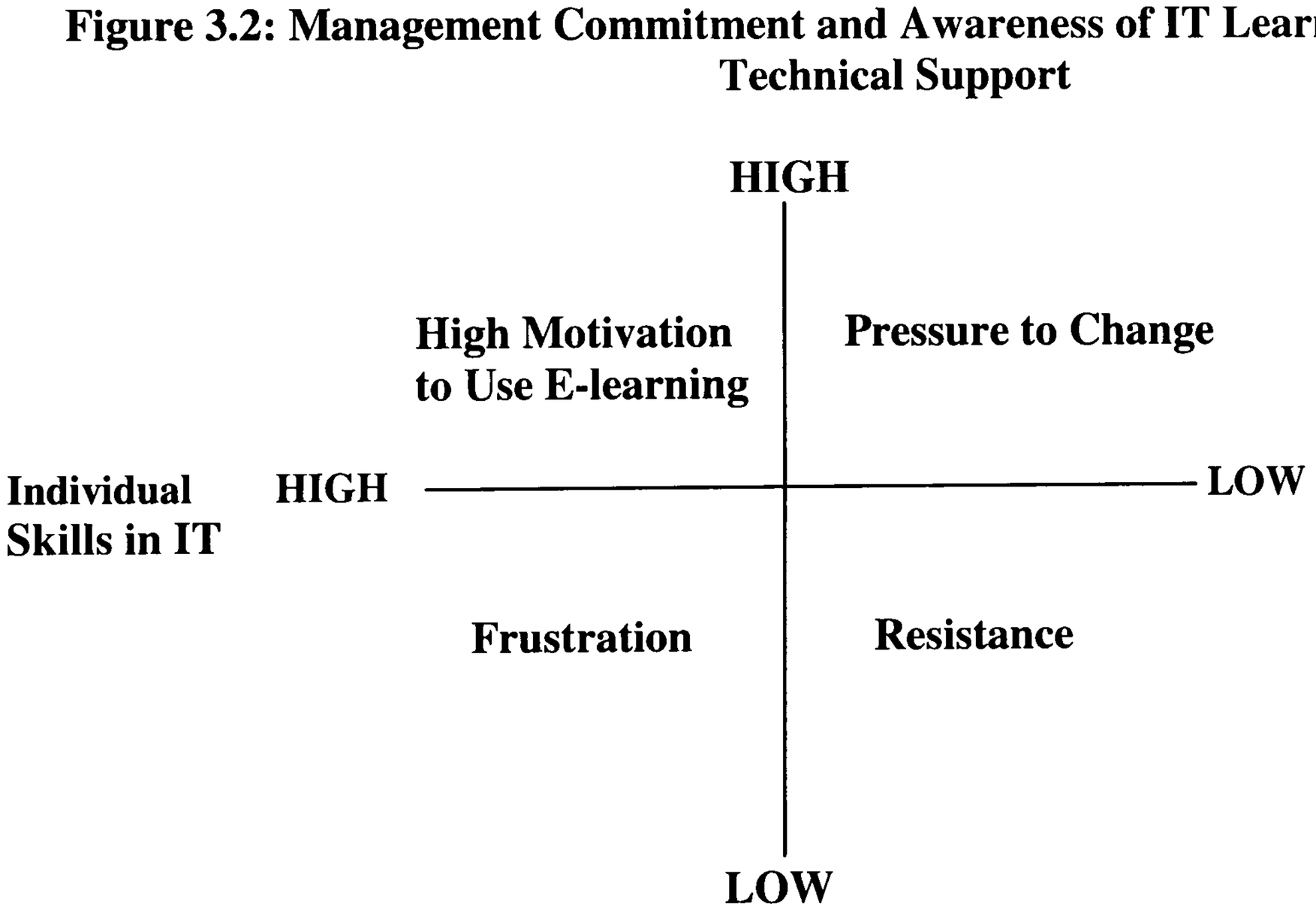
successful option and an indispensable tool especially in scientific or even economic fields."

However, one of the interviewees had this to say:

"You cannot answer the question in a general way. I think the answer differs according to different sectors and different organizations. Some government organizations have effective training administrations, and as such they try to make use of the new technologies and new inventions, while some government administrations are still going with the old traditional methods and could not enter the new era."

In fact, using the Internet depends on the organizations. The managers of some of them who have a good relationship with technology try to encourage employees to deal with and use computers. Technology and resources alone will not result in the development of IT-based forms of learning and professional development. Without training and development among managers in organizations to help them become aware of new possibilities in training, the new technology will not be used. These points can be conceptualized as follows:

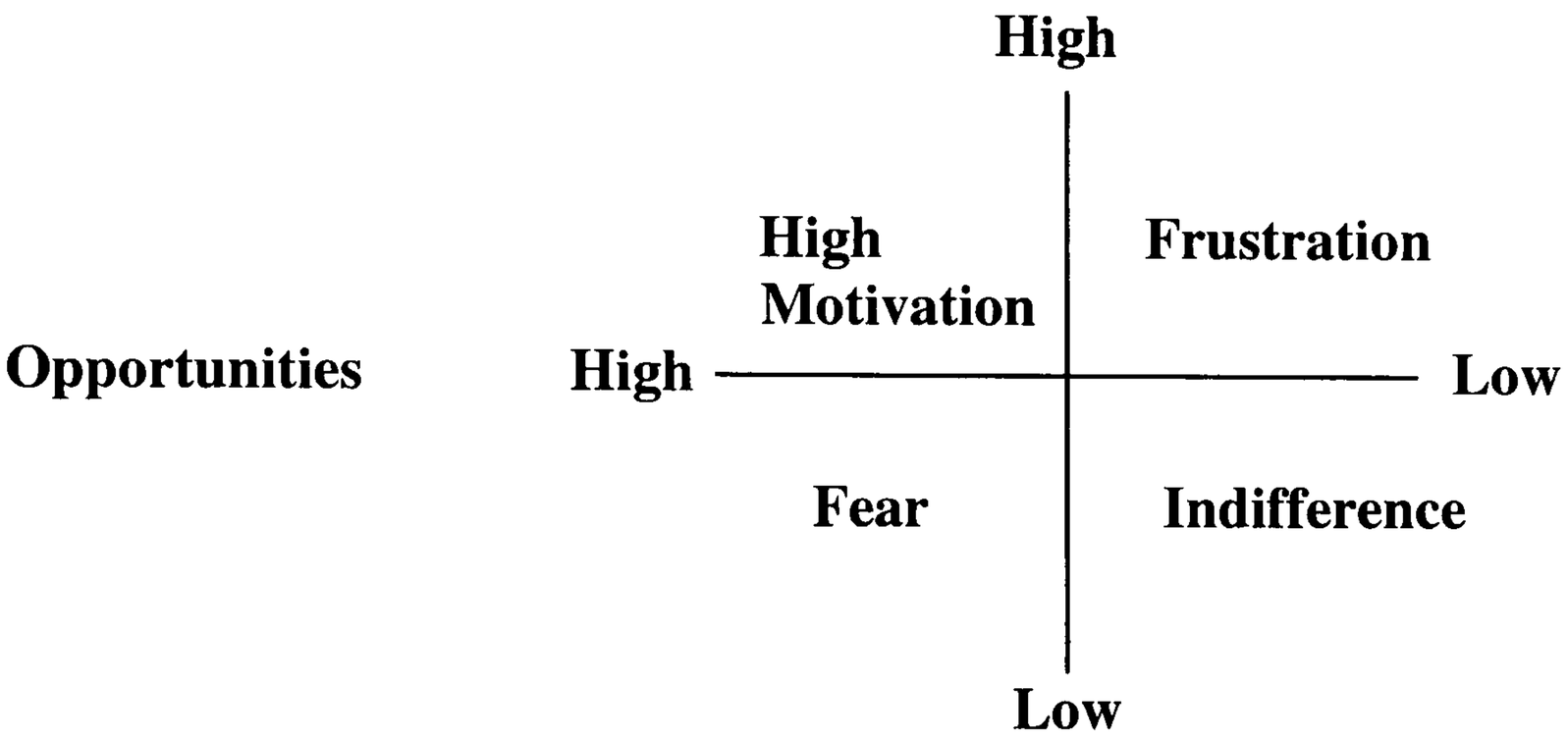
Figure 3.2: Management Commitment and Awareness of IT Learning and Technical Support



These distinctions are worth exploring further. It is clear that different organizational settings will create different attitudes to e-learning.

Therefore, it is important to draw a distinction between both different kinds of organizational setting and different levels of individual motivation to train and develop. Saudi employees are not generally encouraged to train, it is true. But organizations in Saudi Arabia vary significantly from one another in this respect. Some do encourage training and development; some don't. This variation can be conceptualized as follows:

Figure 3.3: Individual Commitment to Personal Development



The different quadrants of the diagram are likely to include settings that nurture very different staff attitudes – from high motivation to train to resistance to any idea of further personal development. Therefore, it is important to find a better framework of incentives and support in the workplace to encourage employees to change. The environment in which people work must change to improve attitudes to training and development. Some of these points are exemplified in comments from interviewees in this research.

Here are two comments, which confirmed the importance of training for employees in terms of new technology. A female doctor interviewed felt that training is very important:

> *"We miss the training and development of employees, because the majority are afraid of beginning anything new, and they don't feel the need for that. But if you think of a certain age group, I think the youth are better, but still there are some personal reasons."*

Another female academic held the same opinion:

> *"Training and development of employees in government organizations are very weak. I think people working in the private sector would like to develop this technology for economical reasons, to lessen work costs and payments costs. So the aim is commercial and economical in the first place. Now*

government organizations begin to look for profit, even universities begin to offer pre-paid programmes. Proof of that are the national universities. We see people who work in private sector more informed of technology and they work to train themselves more than those who work for the government. We are a lazy people and want others to do our jobs. But now there are some difficulties because things are different now. Now jobs are less and demand for them is great which is contrary to what happened in the past."

However, there is evidence that in Saudi Arabia some employers do not encourage their staff to train. Staff will go on courses if they are required to, but if it is not obligatory, they are very likely to remain in their jobs and not to seek further development. As one of the interviewees stated:

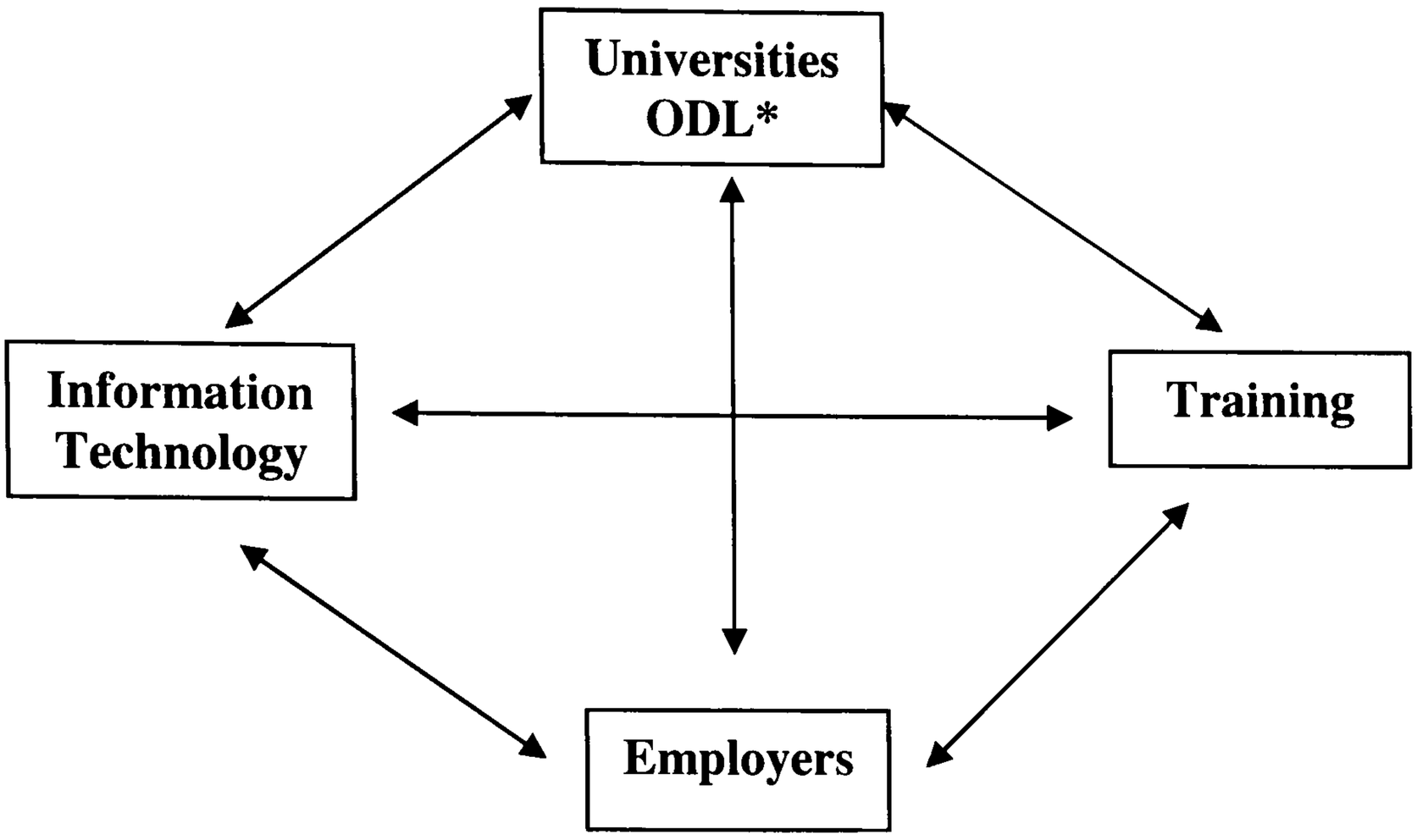
"There are people who develop themselves because they feel the value of development in order to better invest their time and to better perform their jobs or their performance generally in life. But if you mean does the work or the methods of performing work, or do the systems and regulations in effect encourage employees to develop themselves, I believe this is not the case at the present time."

A female interviewee in the Zoology Department supported this and said:

"Yes, but there is a difference and I can't generalize. There are some women, who are eager and ready to develop themselves, and there are others who do not, and I think that depends on the free time they have and the mood. The computer department holds training courses, but they are not compulsory, and the promotion of employees doesn't depend on the training course one takes. But in general we have a system that doesn't drive the employee to develop himself; the annual incentive (increment) comes automatically without bearing on the annual report on the employee. That alone drives the employee not to care much about training issues. The only drive that pushes the employee to develop himself is personal ambition."

This is a feature of the Saudi economy for it is dominated by public sector organizations and government in fact determines the personnel policies within these organizations. If there were a clearer commitment to personnel development in government policies, the demand for work-based training and development would be higher than it is. There are many complex interactions to consider. They can be represented as follows:

Figure 3.4: Training Market Interactions



***ODL = open distance learning**

If employers could be encouraged to do more for their employees in respect of training, then the stimulus to universities to develop ODL courses would be greater.

However, one of the faculty members who distinguished between public and private sectors explained:

> *"I don't think that they develop themselves for using the Internet. If we divide this question into two parts: the private sector and the government organizations, it would be easier. The private sector, if the work necessitates, may want to develop the employee to serve the needs of the work. As for the general sector (the government sector), I think it needs a lot more development and more follow-ups for many reasons."*

He added the reason for that:

> *"I think the main reason is the routine that is more common in the government organization and the difficulty of getting chances for training courses. This doesn't mean that there are no courses, I am speaking generally, but they are relatively few. Perhaps the main reason is that government jobs are more secure and the chance of dismissing the employee from his job is very rare due to his inability to perform his job, as long as he attends regularly. That is maybe, the main reason why he is not very keen about his job, since the payment will be the same and his status will be the same status."*

When we compare between the private sector and the public sector in Saudi Arabia, it is acknowledged that people will choose secure public sector employment in preference to work in the private sector where they know they will be expected to

work harder and where their jobs would be more insecure. These attitudes have to be viewed in the light of history. They are the attitudes of the older generation. In other words, government employees are seen to have safe jobs that provide them with few incentives to change and to develop.

This raises a question about the relationship between the structure of jobs and the motivation of employees to train and develop and acquire new skills. If the job is designed in ways that do not require people to change, or if the chances of development within a job are poor, then people will not feel motivated to learn new things. This leads to the proposition that universities could develop excellent e-learning courses, but there would be no students unless there were changes in the workplace that would encourage them to take part in such courses. Given that public sector employment is a large proportion of all employment in Saudi Arabia, there is a policy challenge here. If the government is to promote e-learning throughout Saudi society, then changes will be needed not just in education, but in the management of public sector employment and employing organizations.

Integrating new technology into the training process will provide organizations with many advantages. Klueter and Kalweit (1998:133) discovered that Internet-based training provides many advantages for organizations, such as benefits from employees through better performance in their jobs, saving travel and accommodation costs for participants and helping employees to share data and ideas inside and outside their organizations.

Furthermore, as mentioned, because the only organization that takes the responsibility for training government employees is the Institute of Public Administration (IPA), this has led to congestion in its training programmes. Universities could contribute through some programmes designed by the development service centre, and that will reduce the pressure on the Institute of Public Administration.

From this point, there are many new questions about the structure of training markets in Saudi Arabia that have emerged. In Saudi Arabia, the government, through the IPA dominates the training market. Individuals have come to expect that their

personal development is something to be paid for by the state. There is not a well-developed private training market and Saudi universities, although allowed to offer income-generating training, do not do so with much enthusiasm. If they do provide such programmes, then individuals are expected to pay for them themselves. This limits the demand for courses. E-learning will only flourish in the context of a growing training market. This is a real limitation in the current circumstances of Saudi Arabia.

CHAPTER FOUR

THE SAUDI EDUCATIONAL SYSTEM AND ACADEMICS' AWARENESS OF THE NEW TECHNOLOGY

CHAPTER FOUR: THE SAUDI EDUCATIONAL SYSTEM AND ACADEMICS' AWARENESS OF THE NEW TECHNOLOGY

The previous chapter aimed to provide an overview of the need for new technology and the development of better systems of education and training in Saudi Arabia. It is now necessary to focus on the educational system and the role of education in economic development in the state, particularly Saudi academics' *awareness* of the new learning technology and the role it could play in development.

This chapter aims to provide an analysis of the Saudi educational system and its role in the economic development of the kingdom and of the extent to which Saudi academic staff are keen to *use* new technology in their teaching. It gives an account of the current model of education that exists in Saudi Arabia and examines the ways in which new learning technologies will challenge that model.

The chapter shows that it is necessary to examine in detail the kinds of work experiences the system of education makes available to academics to understand properly their attitudes to new technology in education. Of particular importance are issues like the time available for training and the degree to which management supports them in their work in curriculum development. These are structural problems; in addition there are many subtle aspects of motivation and professional commitment to be considered if we are to appreciate fully the range of academic attitudes to the new technologies of e-learning and their possibilities. These are complex issues and variations among academics in their attitudes relate to differences in their subjects, their research experience and the support they have had in learning about new technology.

4.1 The educational system in Saudi Arabia

Formal education in Saudi Arabia began in 1924 and has been since then firmly under state control. In 1953, the government established the Ministry of Education, which was in charge of boys' education. Then the Presidency of Girls' Education was established in 1960 to arrange study programmes and a syllabus for girls' education.

According to the Ministry of Education (1994:14-19), the presidency was established "In order to satisfy the Saudi people's ambition of educating girls according to the teachings of Islam". In 1975, the Ministry of Higher Education was established to supervise and control the universities in Saudi Arabia.

4.1.1 Principles and characteristics of the educational system

Saudi Arabia's educational system follows Islamic philosophy. The Ministry of Education (1986:13), pointed out that the main principles and aims of the educational system in Saudi Arabia were as follows:

1- "Belief in Allah as the only God, Islam as the religion and Muhammad (may peace be upon him) as God's Apostle and messenger;
2- A totally Islamic concept of life, the Universe and of mankind;
3- Seeking knowledge is the obligation of each individual and it is the duty of the state to provide and spread education;
4- Recognizing women's rights to obtain a suitable education on an equal footing with men in the light of Islamic laws;
5- Relating education in all stages to the state's general development plan;
6- Conscious interaction with international development in cultural fields;
7- Using Arabic as the language of instruction at all stages;
8- Prompting the spirit of loyalty to Islamic law;
9- Demonstrating complete harmony between science and religion in Islamic law;
10- Encouraging and promoting the spirit of scientific thinking and research."

From the above, education in Saudi Arabia in all its aspects, stages and organization is designed to support Islamic principles and objectives. The government is the main body responsible for education. All stages in the Saudi educational system are free for all citizens and residents. In addition, textbooks are free at all stages as well. The salaries of teachers (male and female) are considered among the highest in Saudi Arabia, and Saudi teachers enjoy a fully paid summer vacation. Schools at all stages in Saudi Arabia are single-sex schools, which means there are two separate systems, one for girls and another one for boys.

4.1.2 Types of education in Saudi Arabia

The educational system in Saudi Arabia consists of religious education, which has two aspects (formal and informal): higher education that is associated with universities and colleges, and general education, which is divided into two categories. Here I will discuss, in brief, these two categories:

4.1.2.1 Boys' education

The Ministry of Education is one of the most important ministries in the country, and has made significant progress. Having started with a few schools it now controls more than 5831 elementary schools, 3008 intermediate schools and 1466 secondary schools, all these just for boys (Ministry of Planning, 1999:55-61).

According to the Ministry of Education (1994:14), the following types of education for boys are provided:

1- General education:

   Six years of elementary school.

   Three years of intermediate school.

   Three years of secondary school.

2- Teacher training;

3- Special education;

4- Adult education and literacy.

4.1.2.2 Girls' education

Before 1960, education was almost non-existent for girls in Saudi Arabia. In 1960, the formal education of girls was established with the creation of the General Presidency for Girls' Education, which was to supervise the education of girls at all levels and stages. However, the education of girls was still controlled by common religious attitudes (Hammad 1973:110).

The objectives of the General Presidency for Girls' Education are to give girls a clear understanding of their responsibilities towards their children, their own home, and society. Simultaneously, this system satisfies the need felt in Saudi Arabia for a flow

of highly trained women for service in education, health, banking and elsewhere. In addition, girls' education follows the same stages and levels found in the Ministry of Education

In 1970, there were only 15 elementary schools for girls in Saudi Arabia. By 1999 this number had risen to 5705 elementary schools, 2460 intermediate schools and 1384 secondary schools for girls (The Ministry of Planning 1999:55-61).

In 2002, the General Presidency for Girls' Education merged into the Ministry of Education. The name of the new ministry has become the Ministry of Education and Learning (Ministry of Education, 2002:9).

4.1.2.3 Technical education and vocational training

Technical education and vocational training are very important for the development of Saudi manpower and improving productivity. Therefore, the Saudi government has been keen to promote this kind of education. Public and private sectors in Saudi Arabia control technical education and vocational training programmes. In the public sector the organization, which is in charge of technical education and vocational training is, as explained in Chapter Three, the General Organization for Technical Education and Vocational Training.

Its objectives are "To develop technical education and vocational training and to execute programmes for the training of national manpower according to the policies laid down by the Manpower Council for training and for technical education covering industry, agriculture and commerce" (Ministry of Education, 1994:19).

There are many training and vocational centres in most of the cities and towns in Saudi Arabia. These centres function at secondary and higher education levels. The number of technical secondary institutions is 36, and includes Industrial Secondary Schools, Commercial Secondary Schools, and Health Institute Secondary Schools. There are 35 higher institutes in Saudi Arabia, including Telecommunications Institutes, Technical Institutes, and Commercial Institutes (Ministry of Planning, 1999:65).

Table 4.1 describes features of technical education and vocational training in Saudi Arabia in 1999.

Table 4.1: Technical Education and Vocational Training (1999)

Variable	Technological Colleges	Industrial Secondary Education	Commercial Secondary Education	Agricultural Secondary Education	Technical Supervisors Institutes	Vocational Training
New Entrants	6005	4913	3271	457	917	--
Graduates	1958	1741	2260	209	632	7006
Enrollments	12462	9667	7678	823	2346	12387

Source: Ministry of Planning, 2000b: 266.

These figures are not large. Vocational education is not valued in Saudi Arabia. This was pointed out twenty years ago by Kisnawi (1981). More recent commentators have made the same point (Al-Asmari, 2001). Saudi people typically regard this kind of education as having less status than academic education. This is a consequence of the rapid expansion of professional jobs in the Saudi economy. Now, however, the demand for jobs in these sectors has declined and the demand for technicians has increased. Educational values are, however, still behind economic changes. People still want an academic education although this will not necessarily lead them to professional jobs. This situation is resulting – as many Saudi educators believe, though research is needed to prove it – in more young people, including women, becoming more interested in technical education.

4.1.2.4 Adult education

The educational system in Saudi Arabia permits students to study at any time they want and at any age. The Saudi government is concerned about adult education and literacy programmes. It has supported this kind of education both technically and administratively. Thus, many ministries in Saudi Arabia participate in programmes of adult education to combat illiteracy. These have been organized through Adult Education and the Higher Committee on Combating Illiteracy. Consequently, the number of illiterates, men and women, has been reduced by the efforts of many groups who work in this field (Ministry of Education, 1994:60).

Table 4.2: Adult Education: Students Number: 1995 -2000

Years	Male	Female
1995-1996	44976	71111
1996-1997	43425	69691
1997-1998	39814	68710
1998-1999	36999	69862
1999-2000	35094	74648

Source: Ministry of Planning, 1999: 69.

The number of the adult education schools in 1999 (see Table 4.2) was 3262 schools for male and female students (2107 female schools and 1155 male schools). Enrolments of adult students in these schools were 35094 male students and 74648 female students in the same period (Ministry of Planning, 1999: 69).

According to the Saudi Education Minister, Dr. Muhammad Al-Rasheed, the rate of illiteracy in Saudi Arabia is gradually declining. Furthermore, he reported that in 1996 the illiteracy rate was 13.17%, and in 2001 it had fallen to 8.8%. "(Al-Rasheed, 2001:1).

A male academic interviewed confirmed that Saudi society is still suffering from illiteracy, which would mean these people could not benefit from the new technology. He states:

> *"Some people in Saudi society would not benefit from it for instance, illiterate people who cannot read and write."*

Adult and literacy programmes throughout the country have the same curricula, study plans and textbooks. Male students study in the evening, while female students have their classes in the afternoon at the same schools in which boys and girls study in the morning. Sometimes, teachers who teach the adult students in the evening are the same teachers who teach children in the morning.

4.1.2.5 Higher education

The first Saudi institution of higher education is the Shari'a or (Islamic law) which was established in 1949 in the Holy City of Makkah. Higher education in Saudi Arabia was non-existent before 1949. In 1975, the Ministry of Higher Education was

established to supervise the implementation of the kingdom's policy in this field. Now it supervises eight major Universities, which are found in major cities and towns in the country.

Three new universities were established in three big cites (Al-Madeenah Al-Monurah, Al-Qasim and Taif) in 2003. In addition, there are four private universities in Riyadh, Jaddah, Abha and Al-Baheh, which focus on science and technology subjects (Okaz Newspaper, 2003:2).

One of the decision makers interviewed to provide feedback on the study findings explained that further new ones are planned:

> *"We have local colleges and local universities such as the hotel Services College in Abha and the establishment of the University of Prince Sultan has been announced and there are others on the way such as Aaft's College, which will become a university soon."*

According to Al-Ankary (Minister of Higher Education in Saudi Arabia), the policy of Saudi higher education is as follows:

1- All citizens in Saudi Arabia are to get the same opportunities in higher education, without any discrimination, according to individual potential and scientific abilities.
2- Universities and colleges will concentrate on scientific research in all fields whether theoretical or applied. It improves work carried out in the social services, research, and publication.
3- The principles of freedom and academic independence in universities and colleges are emphasized by the Higher Education Council Statutes, which support scientific committees at different levels.
4- Most of the higher institutions in Saudi Arabia concerned with training are not under the control of the Ministry of Higher Education. Instead, some of them are controlled by the Ministry of Education, the Ministry of Health or the General Presidency of Girls' Education.
5- Both male and female students in Saudi Arabia have the opportunity to continue their higher education without charge, in all specializations and at all stages.

6- The Saudi government's aim is to evaluate higher education and its contribution to every stage of the country's development.
7- Higher institutes and universities are always to use available methodologies for the evaluation of programmes, administration and equipment in their scientific research in order to achieve good results.
8- Universities and higher institutes have got information, which is necessary to educational processes, to administration and scientific research. This information and data come through information technology – computers, LANs (Local Area Networks) and WANs (Wide Area Networks). All the higher education institutions in Saudi Arabia are connected by the Internet (1998:3-4).

Ain-AL-Yaqeen (weekly Arab Political Magazine Online) states, "Statistics showed that there were 20,000 members of teaching staff at eight universities which are located in different parts of the country, teachers training colleges and technical and health colleges. The number of university colleges now amounts to 72." (2001:online).

Table 4.3 below shows the name of the university or institution and the number of the faculty staff as follows:

Table 4.3: Number of the Academic Staff at Saudi Universities (1999)

Number	Universities or Institutions	Number of the Academic Staff
1	University of Umm Al-Qura	1466
2	Islamic University	372
3	Imam Muhammad Bin Saud Islamic University	1280
4	University of King Saud	2608
5	University of King Abdulaziz	2100
6	King Fahd University of Petroleum and Minerals	650
7	King Faisal University	829
8	King Khled University	355
9	Girl's Colleges	4941
10	Institute of Public Administration	317

Source: Ministry of Planning, 1999:71-98.

Most of the academic staff in Saudi Arabia got their degrees from Western countries, such as the United States, the United Kingdom, Germany, and France. Moreover,

they are keen to promote the modernization of their society while maintaining the Islamic religion and Saudi traditions.

4.1.3 Problems of the Saudi educational system

Despite major changes in courses, curricula and student numbers, the educational system in Saudi Arabia has been suffering from many problems. Al-Senbul, a Saudi academic, mentioned some of these problems, such as:

1. The centralism of the educational systems in Saudi Arabia;
2. Poorly motivated teachers in the general education sector;
3. Problems in the relationship between home and school;
4. Most secondary students study in general education and the minority of them study in technical and vocational training high schools;
5. The government takes charge of the cost of all higher education students in the country. According to current expenditure figures in the kingdom, a single student costs (61409 Saudi Riyal) about (16376 US$). This sum is considered very high;
6. The poor relationship between education and development (1996:83).

Al-Aklobi, a Saudi PhD student, noted many similar problems in his thesis (1992:24) over ten years ago. For example:

7 - In small villages in Saudi Arabia the number of students is small, sometimes only three or four. Consequently, the educational authority tends to teach students of various educational levels in the same class;

8 - In most of the rented school buildings, whether for boys or girls, there are not enough places for computers, science labs and libraries, because these buildings are small.

At the present time, as a consequence of demographic changes, the educational system in Saudi Arabia encounters a very serious problem. This problem is the increasing number of student graduates (male and female) of the secondary schools who need to continue their higher education. At the same time, universities and other institutions encounter big challenges in accepting them. Mosa, Dean of the College

of Education at King Khaild University, said that universities are facing greater pressure to accept more students than they can manage. But, if they absorb a lot of students, this will have implications for university resources leading to poorer quality graduates in some specializations (2000: online).

According to the Sixth Five-Year Development Plan (1995-1999), to solve this problem the government opened a new university in 1998 in Abha city – King Khalid University – and a number of community colleges in different cities in the country (Jizan, Hail, Tabuk and Hafralbatin). This university and these colleges are meant to absorb a lot of secondary graduate students.

The Seventh Five-Year Development Plan (2000-2004) contains proposals and solutions to this problem through the intensive efforts of both public and private sector organizations to establish new higher institutions (Ministry of Planning, 2000b:261).

A male academic interviewed highlighted this problem and suggested a solution for it. He stated:

> *"One important problem that faces higher education in Saudi Arabia is the huge numbers of high school graduates and their getting into the university stage. E-learning might benefit this group".*

He added:

> *"E-learning possibilities might solve a lot of societies problems starting from the big numbers waiting to have a chance in university education, to the limited size of faculties and ending with issues of training and cooperative teaching represented in modern technology and its uses in remote learning."*

These private universities concentrate on the sciences and are intended to absorb the large numbers of school leavers who cannot find places in state universities. They are intended, too, to keep Saudi students in the country, for too many have sought education abroad in other Middle Eastern countries.

There are other problems. Higher education in Saudi Arabia concentrates on qualifications and certificates for students that are not needed for development (Al-

Senbul, 1996:83). Most students prefer to study in the arts colleges more than in the scientific and technical colleges, particularly female students. The Table 4.4 below illustrates this problem.

Table 4.4: Number of the Students in Saudi Universities and Colleges (1999)

Number	Universities or Colleges	Subject of Faculty	Number of Students
1	University of Umm Al-Qura	Colleges of Science	1655
		Colleges of Arts	20198
2	Islamic University	-	-
		Islamic Colleges	4013
3	Imam Mohammad Bin Saud Islamic University	-	-
		Islamic Colleges	32581
4	University of King Saud	Colleges of Science	16162
		Colleges of Arts	30699
5	University of King Abdulaziz	Colleges of Science	10581
		Colleges of Arts	27161
6	King Fahd University of Petroleum and Minerals	Colleges of Science	7139
7	King Faisal University	Colleges of Science	3452
		Colleges of Arts	6880
8	King Kahled University	Colleges of Science	4410
		Colleges of Arts	10056
9	Girl's Colleges	Colleges of Science	37335
		Colleges of Arts	106915

Source: Ministry of Planning, 1999:71-82.

Everybody knows that throughout the developed world higher institutions do not accept all secondary school graduates. Universities in Saudi Arabia, however, absorb about two third of secondary school graduates (Ministry of Planning, 2000b:261). This means Saudi society cannot avoid huge numbers of unemployed young people. Cordesman (2001: 3) reports, "Even today, most educated Saudi women face a dead end at the end of their education and most Saudi young men graduate into purposeless jobs of little real future or productive value to the economy".

The Sixth Five-Year Development Plan (1995: online) outlines the Saudi government's real aims: to increase the number of students, to achieve a balance between Saudi graduates and foreign workers (about 6 million) by replacing overseas

employees with suitably qualified Saudis and to give women more job opportunities in accordance with Islamic Shari'a. Karim, a writer for Al-Shindagah Magazine Online, added that international organizations have been contracted by the Saudi government to train Saudi citizens. These procedures contribute to reduce the pressure of unemployment on the government and also lead to the kingdom's future development (2000: online).

The underlying challenge is to develop a system of education faithful to Islamic principles and responsive to the development needs of an advanced, modern society. This study seeks to clarify the role to be played in this by new forms of open distance learning using Internet technology.

4.2 Saudi academic staff and the new technology

In order to clarify the academics' awareness of the new technology, it is necessary to shed some light on personal and demographic information about them (see Appendix F).

They are a distinct group in Saudi society. Their interests and experience- particularly of those who have studied abroad – are different to those of the population as a whole, particularly of its older members. They are at the forefront of change in the kingdom and provide the key people who will in future interpret the meaning of the social changes taking place in Saudi society.

4.2.1 Saudi faculty members' general awareness of the new technology

The findings of this research indicated that there was a great amount of consistency in the responses of Saudi academic staff in both questionnaires and interviews in their general awareness of the Internet and their competency in the utilization of it.

This is not unexpected. As explained, the use of personal PCs in Saudi Arabia is high and is increasing. Academics are at the forefront of these developments.

Analysis of the questionnaires revealed that 94% of academic staff have personal computers at home. At work just 53.2% of academic staff have a personal computer.

Table 4.5: Possession of Personal Computer (Questionnaire)

Possession of Personal Computer	At Home		At work	
	Number	Percent	Number	Percent
Yes	221	94.0%	125	53.2%
No	12	5.1%	67	28.5%
Missing	2	.9%	43	18.3%
Total	235	100%	235	100%

Table 4.6: Internet Connection (Questionnaire)

Internet Connection	Number	Percent
Yes	104	44.3%
No	125	53.2%
Missing	6	2.6%
Total	235	100%

The respondents were asked to indicate whether or not they have an Internet connection. As seen in Table 4.6, more than forty four percent (44.3%) or 104 academic staff indicated that they did, while the majority of academic staff 125 (or 53.2%) indicated they did not. This distribution of Internet connections can be attributed to the recent development of the Internet in Saudi Arabia, available only since 1999.

Table 4.7 reveals that 54 academic staff (or 23%) indicated that they have no experience of using the Internet in teaching; 53 academic staff (or 22.6%) indicated that they have a little experience, while 104 academic staff (or 44.3) indicated that they were casual users. 15 academic staff (or 6.4%) described themselves as experienced users, and only 6 academic staff (or 2.6%) described themselves as very experienced.

This gives a good indication of the nature of the challenge ahead. The majority of Saudi academic staff have very little experience of using the Internet as a teaching tool.

Table 4.7: Experience of Using the Internet by the Participating Faculty Members (Questionnaire)

Experience	Number	Percent
No experience	54	23.0%
Little experience	53	22.6%
Casual user	104	44.3%
Experienced user	15	6.4%
Very experience	6	2.6%
Missing	3	1.3%
Total	235	100%

The data also revealed that the majority of academic staff - 93.6% - use the Internet for research and more than 66% of academic staff use it for communication. Most of the respondents said that they enjoyed learning about information technology and they would like to spend more time supplying learning and training courses via the Internet. Interestingly, most of the Saudi academic staff would like to learn more about integrating the use of the Internet into their teaching in the future. Tables 4.5, 4.6 and 4.7 illustrate these points in more detail.

The interview results demonstrated similar responses to those of the questionnaires in some respects. All interviewees have personal computers at home and 83.3% of them have them at work. Twenty-two interviewees have an Internet connection. However, 83.3% of the respondents describe themselves as experienced in using information technology and the Internet.

Table 4.8 shows the number of interviewees who have a personal computer at home and work and an Internet connection.

Table 4.8: Possession of PC and Internet Connection (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
I have a personal computer at home.	24	100	-	-	-	-	-	-
I have a personal computer at work.	20	83.3	-	-	4	16.7	-	-
I have an Internet connection.	22	91.7	-	-	2	8.3	-	-
I am experienced in using distance Internet-based teaching methods.	20	83.3	-	-	4	16.7	-	-

These results outweigh the response of the questionnaires. One academic pointed out:

> *"I have a PC and Internet connections. In my teaching I encourage students to use the Internet as well as the intra-net in the hospital. All my lectures now happen on the intra-net and while in the classroom I can bring up illustrative material cases or X-rays available on the Internet."*

Similarly, a female academic described herself as follows:

> *"I am a competent user of IT who like many others, developed my skills informally in the work place. I try to keep pace with new developments. I concentrate on search, communication and entertainment while using the Internet."*

Regarding the IT experience of academic staff, the following viewpoints were expressed:

> *"I have taught through distance learning. I used to work with the Kuwaiti university in teaching a programme through e-mail, whereby they asked me and I replied. I taught a course to Kuwaiti university in this way. This happened in 2002."*

Similarly, one of the interviewees stated that:

> *"The experience was available to me during my study in the US, because it was a necessity for every one dealing with computers and such services, which facilitate more issues. We began in a simple way and gradually gained experience until we became capable users."*

Another academic stated:

> *"I am not a professional. I think I am of moderate experience in the field of the Internet and, with my current knowledge, I cannot provide this service to others in the best way. If I want to provide this service I will look for a training programme to help me before I do that."*

It is obvious from these results that the high majority of respondents of the questionnaires and interviews showed a very good awareness of using PCs and the Internet. This is a result of using the new technology for more than 25 years in different organizations and universities in Saudi society. Moreover, from the beginning there has been a strong trend for the Saudi government to apply the new technology to all aspects of life in the society, in general and in education particularly. Saudi academic staff are using the new technology from their offices, and Internet access is available for them in all universities and institutions in the state.

It is the case, however, as the questions cited above indicate, that academics who have been educated abroad or who have worked abroad, are more likely to claim that they have the ability to integrate web-based resources into their teaching.

It could be deduced, therefore, that with appropriate training Saudi academic staff would feel confident to use new technology in teaching.

These findings are consistent with those of previous studies suggesting that when the new technology and access to the Internet are available for faculty members this would lead to positive attitudes toward using and integrating the Internet into teaching. Zakaria (2001:54) (in Malaysia) and Baxter & Miller (1998) (in the USA) argue that, in order to encourage positive attitudes toward integrating information technology into the learning and training process, academic staff need resources and training. In the Baxter & Miller study more than 78% of the participant academic staff were satisfied about their teaching via the Internet (1998:9).

Furthermore, Mcleod (1998) and Cook (2000), commenting on the US experience, found lack of access to the Internet and lack of training seem to be the main problems. For academic staff to overcome this, they recommended that governments should make Internet access more available for users, particularly academic staff, students and trainees. In addition, higher education institutions should offer training programmes and courses in order to help users to improve their knowledge and abilities with regard to the Internet and its tools.

One of the academic staff interviewed in a discussion group about the findings of this study requested that:

> *"The government has to facilitate the access of its citizens to the Internet, to make greater use of the Internet and the infrastructure must be renovated and made stronger to benefit from the experiences of other countries in this regard."*

Another one revealed that:

> *"Some sectors provided the Internet freely which increases its use by the employees and that made it a positive factor; the cost obstacle is eliminated. Some countries with limited or simple capabilities provided the Internet freely or nearly freely to its citizens, which help the spread of the Internet. I hope the Saudi government makes the Internet available and free for everybody soon in Saudi society."*

Collins, (1999:85), Gilmore (1998), and Christensen (1997) revealed that academic staff who have used the Internet as a tool in distance learning had more positive attitudes and less anxiety about using it than those who have not.

The Saudi government is concerned about introducing the new technology at all levels in the society, especially in higher education. It seeks to keep pace with accelerating changes in this field all over the world. But the Saudi government should take IT training into consideration in order to benefit from the new technology as much as possible.

4.2.2 New technology training of Saudi faculty members

It is important to know the level of the academic staff's technology training. This study has revealed some new data about this. Table 4.9 shows that the majority (90.3%) or 204 of academics had special training, while only 22 (or 9.7%) said they did not. Also, a majority of the academics (186 or 80,9%) said they had formal IT training, while 44 (or 19.1%) stated they did not have formal IT training. Asked if they had training in computer connection to campus resources, 174 academics (or 74.7%) said yes they had, while 59 (or 25.3%) did not have training to use campus resources.

Seventy percent (163 academics) stated that they had training to benefit from the Internet's resources and applications, while 70 academics (or 30%) said they did not have training in this aspect.

Table 4.9: Information Technology and Internet Training of the Academic Staff (Questionnaire)

Items	Yes		No	
	F*	%	F*	%
Have you had any formal Information Technology training?	186	80.9	44	19.1
Have you had training in computer connection to campus resources?	174	74.7	59	25.3
Have you had training in the utilization of the Internet's resources and applications?	163	70.0	70	30.0
Have you had special training for this new pedagogical method (computer-based distance education)?	204	90.3	22	9.7

(*) Frequency

Academic's evaluation of the training they have received is illustrated in Table 4.10. When they were asked how they would describe the training they had received in this field of IT, most of the participating academics demonstrated positive attitudes. It can be seen from the table that the majority of respondents (85.1%) agreed or strongly agreed that they enjoyed learning about information technology. More than sixty six percent (66.3%) of academics thought the information technology courses attended were helpful. 63.3% of respondents believed that their IT training was interesting. Finally, more than sixty-one percent (61.8 %) of respondents agreed that the people who taught them IT were good teachers.

Taken together, these findings revealed positive attitudes on the part of academics about their IT training.

Table 4.10: Academic Staff Evaluation of the Training they have Received

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
My information technology training was interesting.	5	4.6	4	3.7	31	28.4	58	53.2	11	10.1
The information technology courses I attended were helpful to me.	3	2.9	7	6.7	25	24.0	52	50.0	17	16.3
The people who taught me information technology courses were good teachers.	2	1.9	8	7.5	31	29.2	56	52.8	9	8.5
I enjoyed learning about information technology.	3	2.6	-	-	14	12.3	61	53.5	36	31.6

(*) Frequency

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Table 4.11 summarizes the responses of interviewees about their formal IT training.

Table 4.11: Formal IT Training (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
I had formal I T training in the utilization of the Internet's resources and applications.	3	12.5	-	-	21	87.5	-	-
I used to keep up to date with software.	20	83.3	-	-	3	12.5	1	4.2

In short, the findings from the questionnaire showed that 80.9% of the academic staff had formal IT training. On the other hand, eighty-seven percent of interviewees disagreed that they had formal IT training. But 83.3% of the interviewees used to keep up to date with their skills and knowledge of new technology and the Internet by themselves through regular use of IT. Some reasons to explain the interviewees' opinions were offered:

> *"I did not take any training course and the computer was not among the subjects I studied at any level of my education. All I got was personal reading and practical knowledge gained from different sources that enabled me to deal with computer and information technology."*

Likewise, another academic stated:

> *"I discovered the Internet myself. I did not receive any instruction on its use in training and education. I have a general knowledge about Power Point and all MS applications and as such I think I can cope with it with no problems."*

With regard to keeping up to date with software, a male academic commented:

> *"I know what I need always and try to improve myself. Year by year I see the difference and some personal development, but I haven't had any training course."*

A female staff said that she intended to:

> *"Update my knowledge and expertise through attending a informal training in the summer."*

It is clear from these results, that most of the respondents' experience of IT was instructive. These findings highlight the importance of the regular use of IT and that such use promotes learning from experience. Those who do not have such an opportunity are likely to lose the skills they have acquired on training courses. Improved training for IT will only be successful if it is accompanied by improved opportunities to apply skills and knowledge. This means that the provision of PCs and access to the Internet alone in education is not enough. It has to be followed up with training about applications. Unfortunately, in Saudi Arabia, employees develop IT skills informally in the workplace.

It is important for academic staff to have both knowledge of IT and access to the Internet and its tools continuously. Studies have shown that a lack of training has had the largest effect on academic staff regarding using and integrating the Internet into learning and training processes. In addition, the lack of training has been the main factor affecting academic staff attitudes. Shuchman, a writer in the Industry Standard Magazine Online, has argued that there are several barriers to e-learning; the main barrier is limited access to broadband technology and the need to boost the level of knowledge and skills of teachers through high technology training (2000:online). McConnell (2000:190) confirms that an important condition for the Internet to be effective in education is the provision of good and well-trained faculty members to make sure students' performance is improved.

Mathews (1998) disclosed that lack of training led to poor staff performance, lack of motivation, opposition to change and increasing negligence and errors. For the most part, academic staff who had already had Internet training courses felt more confident and motivated, accepted changes and their performance improved. Kirkpatrick and Jakupec, English writers, supported these views and explained that academic staff in higher education institutions who are unfamiliar with information technology need basic training to use IT in general and e-learning especially (2001: 64).

They emphasized that when academic staff are acquainted with the technologies they can explore their capabilities to integrate them into their teaching. On the other hand, the negative attitudes of faculty members, which come through a lack of knowledge, skills and practice in using e-learning efficiently, hinder change in the educational system.

In spite of the fact that the majority of respondents saw the importance of using new technology, there are academic staff who resist using the Internet in education because they feel that there is more preparatory work for them in this process and, also, some of them thought that they did not need to work in an e-learning environment. Wicklien, who is an academic in the University of Georgia in the USA, commented that one of the main problems encountered in using the Internet in teaching and learning is that faculty members are at different levels. Older teachers and professors may have difficulty using the new technologies (2000:1).

The emerging conclusion is clear: Saudi strategies to improve the use of e-learning tools as a way of contributing to the development of the whole educational system depends fundamentally on improving the training of academics in this field.

4.2.2.1 Training time for academic staff

The responses gathered from the questionnaire demonstrated that the majority of academic staff (73.9%) considered that they did not have enough time to develop their skills on PCs and the Internet. On the other hand, the majority of the interviewees (62.5%) believed otherwise (see Table 4.12). The differences between

the two sets of results are not great and arise from the differences between the two methods of sampling that produced the two lists of respondents.

Table 4.12: Information Technology Training Time (Questionnaire)

Items	Yes		No	
	F*	%	F*	%
Do you believe staff have enough time to develop their skills with the Internet?	**61**	**26.1**	**173**	**73.9**

(*) Frequency

Table 4.13 sets out the responses of interviewees about time for training for Saudi faculty members in IT.

Table 4.13: IT Training Time (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
Academic staff have enough time to develop their skills on PCs and the Internet.	**15**	**62.5**	**-**	**-**	**9**	**37.5**	**-**	**-**

Several interviewees made some comments about the time available to them to develop their skills on PCs and the Internet. For example one interviewee stated:

> *"Yes, I think if a person believes in the importance of getting enough training, he will find the time for that. But no doubt the staff member's time is full, especially since our universities are like bigger higher schools aiming at teaching and graduating large numbers of students. But most staff members have no time for doing their research except in the evening, and we have to stay late at night because in the mornings we are tied up in delivering lectures or in administrative duties or meetings."*

Another academic thought that:

> *"They have enough time and they have the ability but do they have will or encouragement to use information technology? I do not think so; they still need encouragement from university administration."*

> *"Academic staff in the Institute of Public Administration do not need time to train. Because they always deal with information technology as a part of their job. Therefore, they update their skills everyday."*

These comments emphasise some interesting differences among academics and highlight some important issues. Clearly, the pressure of student numbers is a real constraint on innovation in Saudi universities. However, if the experience of colleagues in the Institute of Public Administration is taken into account, it is also clear that regular opportunities to use e-learning tools is very important.

Some interviewees distinguish between academic departments in the opportunities they offer.

> *"Departments are different; some academic staff in some colleges spent 6-8 hours per week teaching, as for the Islamic culture department which deliver lectures to all university students – men and women – they spend more than 14 or 16 hours per week teaching, consequently their chance of developing themselves is less. The Islamic culture department and theoretical departments need to access the world of technology more than others."*

However, an interviewee noted:

> *"I don't think the problem lies in time for the academic staff. Of course they differ, some of them are busy doing research or teaching in the university. But they will always find the time, and the organization must create the time for him to train himself."*

One of them referred to enthusiasm and related it to a wider set of issues about the context of Saudi society:

> *"I think if someone is serious and keen enough he will find the time needed for development. So accordingly, the problem is not in finding enough time to do research or in the pressure of work; it is mainly in the desire and in the social dimension. We know that in our society, family relations and social ties takes a lot of time and it is the issue that makes every body busy. Whatever time research work takes, academic staff will always find time to educate and develops themselves."*

A female academic suggested that:

> *"No doubt there is some kind of pressure regarding the time element, and there should be a special time for training. For instance, there should be special times for training allocated by the university and college administration. Still there is the possibility to perform training through short courses and through the use of the Internet."*

37.5% of interviewees thought that academic staff have not enough time to develop their skills on PCs and the Internet. They mentioned several reasons, for example:

> *"Like any other work, in our country, a person looks for what he will gain from such work, what he will get out of this work? Is he going to increase his pay or his rank? If all these issues are not related, I think every one will say I have no time. But if there is a material or spiritual gain, I think there will be a response; and the response will depend upon what the staff member will gain out of this work."*

Another one said:

> *"I think the working day is too short due to the many responsibilities one has to attend to. But there must be a personal interest and desire for personal development, even though time is very limited to do that."*

There is no doubt that staff members' time is full, especially in Saudi universities that aim to teach and graduate large numbers of students. Most staff members have little time for their own research except in the evening, especially with science subjects. The questionnaire results highlight how difficult it is for Saudi academics to find the time or the energy to develop new forms of teaching and learning using new technologies. These may well be the solution to their problems, but a lot of investment both of time and money is needed to bring these solutions forward.

Behind this there are other complex questions related to the motivation of academic staff to engage in curriculum development. Many academics do work outside their main jobs to earn more money. There is not the same pressure on them as there is, for example, in western societies, to write and to publish books. There is not, as yet, in Saudi Arabia a strong academic interest in curriculum development as a theme for research and innovation in teaching. For too many of them, university work is secondary to their main interest to earn more and meet other demands on their lives, like meeting their family obligations. Academics typically feel, in addition, that their rewards for the job – pay and conditions – are not as good as they should be e.g. in comparison with school-based teachers. This comparison helps explain why academics often look for opportunities outside the university to earn more money or to develop their careers in other ways. This means that people interested in curriculum development using e-learning technology will do so outside their own universities – perhaps abroad e.g. in Kuwait (where there is an Arabic Open University) or through private institutions that are earning money from this new technology

Despite this, the pressure on Saudi universities to innovate in teaching is high. There is a growing demand for places. Students are from a generation able to use IT and who expect to use it as part of their studies. Those who cannot be admitted need help and IT can play a role here. From these points of view, Saudi academics will be under greater pressure in the future to innovate in their curriculum development. They cannot avoid it.

Abahussain, who researched Saudi academics in the late 1990s (1998: 96), agrees that Saudi academic staff consider that when they prepare their courses using technology they might need more time for the work could become a burden to them. To overcome this difficulty, it would be the duty of administrators to balance teaching schedules for academic staff involved with e-learning.

The results of the interviews highlight that the majority of academic staff have enough time to develop their skills on PCs and the Internet. Most of the interviewees linked the time for training with motivation and incentives for academic staff (individuals) to drive them to join training courses. This is a very important point. Motivation to learn cannot be separated from the settings in which individuals work. If the settings support people to learn new things, then they are quite likely to want to do so. In other words, there should be special times for training allocated by the university and college administration.

But there is a question. Have academic staff in Saudi Arabia reached the conviction or the belief in continuous learning to develop their skills in IT? Saudi faculty members, in general, have secure jobs, especially in the public sector. This means they do not have big incentives to change and develop. But the private sector is changing fast and will challenge many aspects of employment arrangements in the public sector, forcing change throughout that sector. There is a need, therefore, for IT training course opportunities to develop. The development of such opportunities will help change attitudes to learning.

General speaking, the priorities of academic staff differ from one person to the other in relation to their specializations. Time is not the only factor that hinders faculty members from developing themselves.

4.2.2.2 University administrative support for academics

With regard to the question whether the university administration encourages faculty members to attend information technology training courses, 88 respondents of the questionnaires (or 38.3%) stated that the university administration does encourage them to attend new technology training courses, while almost twice that number took the opposite view. However, less than half of the interviewees considered that university administration does not encourage them to attend IT training programmes. Nevertheless it is difficult to support training in reality, because of the many lectures and other working commitments lecturers have (see Table 4.15).

Table 4.14: Encouragement to Train (Questionnaire)

Items	Yes		No	
	F*	%	F*	%
Does the university administration encourage faculty members to attend information technology training courses?	**88**	**38.3**	**142**	**61.7**

(*) Frequency

Table 4.15 set out the responses of interviewees about university administrative support for academics to train.

Table 4.15: Encouragement to Train (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
University administration encourages faculty members to attend IT training courses.	**10**	**41.7**	**3**	**12.5**	**11**	**45.8**	**-**	**-**

According to one male academic who disagreed:

"No, the university administration never encourages academic staff to train in terms of information technology. I remember last year there was an issue of this kind that is programmes of modern technology were introduced, but they stopped. I don't think it is the responsibility of the university to provide such programmes. Academic staff have to educate and qualify themselves. But those who really need rehabilitation are the employees in the libraries and technical laboratories. Staff members should take the initiative themselves"

By contrast, another male academic said:

> *"In reality the training of academic staff is a personal issue, that is they are responsible for developing themselves. But the university hopes to see the staff at a higher level of expertise and have the ability, to use modern technologies and train for it. The outcome of course, will be to the benefit of the university."*

Therefore, if the university hopes to benefit from staff at a higher level of expertise and with the ability to use modern technologies then they must offer training.

The university administration has to encourage academic staff and other employees such as library staff. As librarianship becomes information science, their skills must change. They will have a crucial role to play alongside academic colleagues in developing e-based courses. Of course, it is not only librarians who are important. Those who can design web sites, create attractive learning materials, or make links between courses and the Internet, have important skills.

The development of e-learning and training is clearly related to the ability and understanding and leadership of people in positions of responsibility. One member of the discussion group, providing feedback on this research, highlighted this when he said:

> *"The university chancellors have two problems: the first is a financial one because they do not give the academic staff a computer allowance, and the second problem is that they don't understand the importance of using the computer."*

Another one stated:

> *"If university chancellors believe in it and they want it, they can do it, but the issue is about adopting the idea and having the will. Other than that there is no problem. The capability is there and if you look at the budget of the universities you will see huge amounts of money. But these amounts should be directed according to the belief and conviction of the man in charge."*

Cook (2000) and Hemmington (1999: 104) show that university and higher institution administrations have a huge potential and chance to help faculty members to have a positive perception of the Internet and to incorporate it in their work. They can help the continuing professional development of employees through online training.

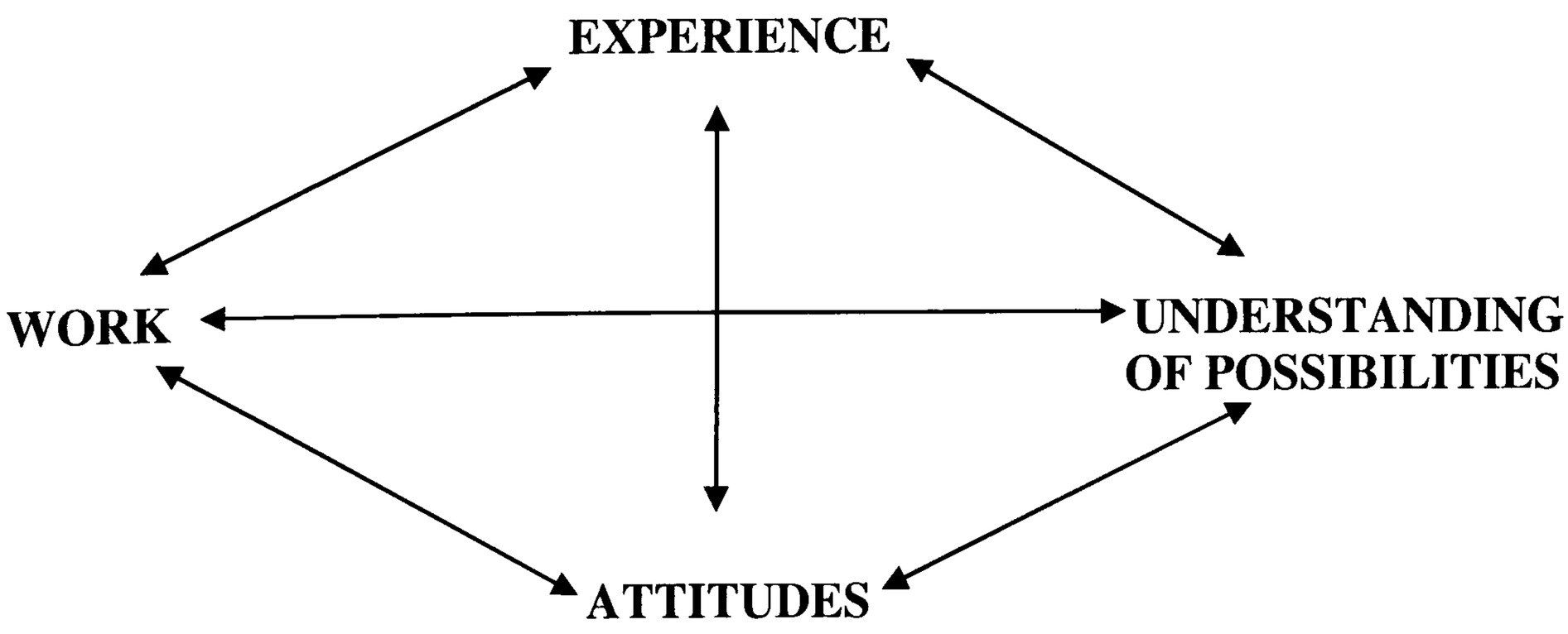
Saudi academic staff are likely to be very supportive of IT and of new methods of teaching and learning. They are 'modern' in outlook and aware of both the relatively poor technical support structure for e-learning in the country and of traditional social and educational attitudes that they hope will change. They are not frightened by the prospect of change in their roles. Indeed, they welcome change.

On the other hand, the management of change in Saudi Arabian universities is difficult. Academics are busy with routine work. Unless there are incentives, they will not change their work practices. There is no competition between universities to create a climate in which academics will actively seek to change their work, their courses and their use of IT. This places limits on the extent and speed of change in all areas of academic life, but particularly in relation to new curricula using new technology.

If universities are to develop new forms of teaching and learning, they will have to encourage their academic staff to become involved with a wider constituency of students, different styles of research and build stronger links with other organizations that may require training for their staff.

Therefore, e-learning and e-training in Saudi Arabia (or, indeed, any other society) requires steps to help academic staff and other people perceive the possibilities more clearly and to provide them with experience in using IT. The elements of this might be conceptualized in the following model:

Figure 4.1: Attitudes and Experience: A Model



The model is a simple graphical representation of the groups of variables that may interact to shape the attitudes of academic staff towards the new technology. It clarifies the assertion that attitudes and perceptions are related to the experience and working contexts of people.

We can deduce from this model a number of hypotheses. For example, we would expect that people who have had experience of using PCs and the Internet will be more likely to have positive attitudes towards their use in learning, compared to those with little experience. Similarly, those who are required to use PCs in their workplace are more likely than those who do not to have positive attitudes. It would follow from this that improvements in Saudi policy and strategies towards e-learning will require programmes to help university staff to become aware of new curricula possibilities and to extend the experience of those who do not use PCs so that they become more familiar with the technology. In short, there is a very important staff development job to be done. The provision of technical resources alone would not be enough to stimulate the development of e-learning in Saudi Arabia.

There are several studies that support this view. In the University of Qatar, Al Mannai (1992), Knezek (1997) and Christensen (1997) from the USA, concluded that staff members and students, who had experience with technology, had positive attitudes toward using it and integrating computers into their education.

Overall, people who have a positive view of the role of technology in modern society are very likely to show a strong interest in and support for e-learning and the world of IT. Other who have either fears or suspicions about technology and the forces that drive it, are more likely to have reservations about e-learning. These subtle factors of culture and perception need to be taken into account by managers in educational organizations if they are to achieve change in this field.

4.2.3 Information technology technical support

This research has shown the viewpoint of academic staff regarding the technical support that they received. It is interesting to note that the majority of the academic

staff who answered the questionnaires and interviews disclosed that they have had technical help in their universities and colleges but at different levels and degrees.

The responses of interviewees about their attitudes toward technical support are summarized in Table 4.16.

Table 4.16: Interviewees and Technical Support

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
I have adequate technical help in my faculty to enable me to use computers to their full advantage.	**21**	**87.5**	**-**	**-**	**2**	**8.3**	**1**	**4.2**

The majority of the interviewees (87.5%) said that they have technical help in their faculty to enable them to use computers to their full advantage, but some of them mentioned that the universities and colleges provided some technical support but not enough. Some of the interviewees who teach in science or medical colleges get good technical support, more than their colleagues in other colleges. A member of staff at the Computer Science College mentioned:

> *"Now I know if I lack something I will seek help. As for me I have technicians in the faculty of computer sciences and I get help always. In the education section there is no such service, and this will be a problem, not having technicians to help with the technology."*

A medical doctor was of the same opinion:

> *"Yes I have. The university has provided computers, printers and Internet services, and I have my own sites. I can get what I want with regard to some medical areas for free. In the university and hospital we have employees of the technology service section who are there to help whenever one has a problem."*

On the other hand, other interviewees got little technical support. They commented:

> *"When the university has adopted distance training and learning it has to bring enough technical support. "*

> *"The officials responsible for providing this service in the college of computer science are doing their best to solve all problems, but I think the service is still new for the university and they are trying as much as possible to give help."*

"From this side, technical support is weak because good technical experts do not continue working in the university."

"No, but the university provided me with a computer and Internet access. What I need is some time after work hours to attend some advanced courses in order to use the technology in a better way."

"The university, unfortunately, has not provided enough technical support."

"The university has given academic staff PCs and Internet connection but the technical support is not what we expect."

Responses highlight the importance of good technical and infrastructure support within any organization seeking to benefit from the new technology. If such support is not in place, use of the new technology will not develop. But at the moment technical support is poor in some Saudi organizations and universities.

Most of the academic staff who studied abroad have had experience of good technical support for IT. This experience helps them to identify a key weakness in IT support in Saudi Arabia. A clear conclusion emerges: their skills will not develop to their full potential unless there is a framework of up to date technical support. There are limits to what people can achieve by themselves. This leads to a more general point: even those who are technically competent with IT require continuous technical support to maintain the level and relevance of their skills. This has major implications for policy in Saudi Arabia.

Baxter and Miller (1998) highlighted the importance of technical help and agreed with the previous finding that academic staff who have faced pressure to improve their skills through the new technology, have struggled to find technical support to help them when they needed it.

When the universities and higher institutions embark on e-learning, they need technical help more than before. Donnelly (1996:93) expects that in the future faculty members who teach in e-learning will find themselves having to work more flexible hours to teach the learners.

The problems discussed so far related to how changes can be brought about within universities themselves. The power of e-learning extends beyond internal university courses. The demands of social and economic development in Saudi Arabia and other developing countries place a requirement on universities to engage in work-based training and professional development. Universities must, therefore, engage with new groups of students who live and work in very diverse settings.

4.3 Integrating information technology into the learning and training process

New technology is widely considered to be the ideal device for delivering instruction to learners (whether individuals or groups) in different places in the world. This kind of technology is very useful for individualized instruction, particularly for those who have special circumstances, for example, housewives, people who live in remote areas and prisoners. Most of the time these learners or trainees work separately from others and from instructors (Imel, 1998:3). It is relevant, however, to all groups in the work place who need to improve their skills and knowledge.

It is difficult to know in advance which groups can benefit from web-based learning and which cannot. Nor is it easy to identify clearly what kinds of courses could be made available to people in different industries or professions. Not enough is known about training markets in Saudi Arabia and how they might develop in the future.

Feedback from those interviewed has enabled the researcher to feel confident that these interpretations are reasonable. One colleague, for instance, when asked if he thought all groups in Saudi society were going to benefit from e-learning and training answered:

> *"No. I expect that not all these groups are going to benefit from e-learning and training. In Saudi society there are a lot of illiterate people, and they are definitely not going to make use of the technology. I think radio sets are more useful to them than the Internet, because they do not require training."*

A decision maker stated:

> *"No doubt there will be benefits, but some groups in society, the illiterates for example, will find it is very difficult to gain any benefit from the technology without the introduction of an intermediary."*

In any case, before the government or universities begin to plan the development of courses, there are a number of issues to be examined. Firstly, before people can learn anything using distance learning, they need to be able to use the technology involved. This means that the development of training programmes needs to follow on from programmes that teach people to use the new technology. This will help them overcome anxiety and any resistance to learning in this way (Imel 1998).

Before this stage is reached, however, there must be instructors and trainers available who are themselves competent in using the new technology. The academics who will supply the materials that will be transformed into web-based learning materials need to be able to cooperate with a range of technical staff who know the technology well. They will also need to be enthusiastic about such methods of teaching and learning and be aware of the special problems they present.

4.3.1 Attitudes of Saudi academic staff towards integrating the Internet into the learning (training) process

In view of the advance of the technology, the Saudi government is anxious to provide opportunities for Saudi people in general and educated people particularly to use the new technology in all aspects of life. This study has revealed the attitudes of Saudi faculty members toward using new technology, especially the Internet, to be very positive.

4.3.1.1 Enthusiasm of Saudi academic staff

Based on the findings presented in Table 4.17, there is enthusiasm among Saudi academic staff to integrate the Internet into their teaching. The majority of the respondents believe that IT will solve a lot of the teaching and learning problems of Saudi society.

To be more specific, it can be seen from the table that a majority (95.3%) of respondents disclosed that they would like to learn more about integrating the use of the Internet into their teaching. Furthermore, 80% of respondents agreed or strongly agreed that they would like to spend more time supplying training courses via the

Internet. Finally, the majority of respondents - 54.5% - were undecided while only 37.6% of respondents stated that they would teach courses via the Internet as soon as possible.

Taken as a whole, the findings reveal positive attitudes on the part of the majority of academic staff about web-based teaching and learning.

Table 4.17: Degree of Enthusiasm of Faculty Members to Integrate the Internet into the Teaching Process (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
I would like to learn more about integrating the use of the Internet into my teaching.	2	.9	1	.4	8	3.4	99	42.7	122	52.6
I would like to spend more time supplying training courses via the Internet.	3	1.3	10	4.3	22	9.4	130	55.8	68	29.2
I will teach courses via the Internet as soon as possible.	7	3.0	11	4.8	126	54.5	65	28.1	22	9.5

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

The responses of interviewees about their enthusiasm toward using the Internet in learning and training processes are summarized in Table 4.18.

Table 4.18: Degree of Enthusiasm of Academic Staff (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
I am an enthusiastic to provide learning and training courses through the Internet.	23	95.8	-	-	-	-	1	4.2

The findings revealed that almost all interviewees - 95.8% - thought that they were enthusiastic about providing learning and training courses through the Internet in the future. The majority of the respondents believed that IT would solve a lot of problems in education and training.

A medical doctor who was very keen explained in an interview:

> *"Continuous education is very important for doctors. With the new technology you can do this anytime, day or night and this cannot be done within traditional methods of postgraduate training. E-learning can take place across the world and save time. Video-conferencing is very important. People might feel this will be expensive but it is still much cheaper than people travelling. E-mails allow instant communication and all students will benefit. I expect in the future that all universities in the world will work in this way."*

In spite of the great enthusiasm for using the new technology in teaching, instructors and learners still need advanced IT skills and have to know how can they deal with the Internet before they start to teach and learn through it.

Mathews (1998) and Ferraris et al (2000) have separately argued that the enthusiasm of academic staff to adopt online learning and training has a strong link with whether there is enough time for them to do so. Faculty members who are working in successful and well-managed universities and colleges have a good chance to improve and update their abilities, skills and knowledge and are more enthusiastic about providing courses and programmes via the web.

The main message from these commentators is this: enthusiasm for using the new learning technologies and the confidence to do so grows from use and practice. If, for whatever reason, neither are possible, academics and teachers are likely to be anxious about developing their work in this field.

4.3.1.2 Anxiety of Saudi academic staff

The analysis of the questionnaire and interview data in this research shows that the respondents, in general, viewed that working with Internet-based training courses would not make them feel frustrated and anxious. Table 4.19 shows how academic staff replied when they were asked about their feelings of anxiety towards using the Internet and providing training courses that involve its use.

It can be seen that the majority of respondents - 55.2% - disagreed or strongly disagreed while (41.2%) of respondents were undecided whether Internet-based

training courses frustrated them. Also, more than fifty three percent (53.5%) of respondents did not believe that working with distance Internet-based training courses makes them feel very anxious while (39.7%) of respondents were undecided. However, as for the statement, "I hesitate to teach through the Internet for fear of making mistakes I cannot correct", the majority of respondents (52.1%) disagreed while (36.7%) of respondents were undecided.

With respect to interviews, data revealed that 66.7% of interviewees would not feel anxious when they worked with distance Internet-based training courses, while 33.3% believed otherwise.

Overall, these findings indicate that the majority of academic staff do not display any anxiety about the prospect of developing web-based training courses.

Table 4.19: Anxiety Towards Using the Internet to Provide Training Courses (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
Working with distance Internet-based training course would make me feel very anxious.	31	13.8	89	39.7	89	39.7	11	4.9	4	1.8
Internet-based training courses would frustrate me.	33	14.9	89	40.3	91	41.2	4	1.8	4	1.8
I would hesitate to teach through the Internet for fear of making mistakes I cannot correct.	22	10.0	93	42.1	81	36.7	21	9.5	4	1.8

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

The responses of interviewees about their anxiety towards using the Internet in learning and training processes are summarized in Table 4.20.

Table 4.20: Degree of Anxiety of Academic Staff (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
Working with distance Internet-based training course would make me feel anxious.	8	33.3	-	-	16	66.7	-	-

One of interviewees who did not feel anxious remarked:

> *"I don't think I will feel frustrated or embarrassed, because, in my opinion, the teaching process, when practiced and trained for, will become a normal thing. We do some teaching using closed-circuits television and, even if the picture is not the same, one would have the experience of talking in a confined place. The place, of course, would be far away from those who listen, in the way that information gets to them through this means of communication, which is a closed television network."*

In Saudi Arabia, most of the universities provide teaching courses for female students by closed-circuit television, which provides staff with the experience of talking to learners at a distance.

The findings of this study concur with the conclusions reached by Gilmore (1998) and Christensen (1997) who indicated that academic staff who have used the Internet as a tool in distance learning had significantly more positive attitudes and reduced anxiety than those who have not.

Respondents in both questionnaires and interviews worry only about the Internet connection when it breaks down. One interviewee explained:

> *"I worry only about the Internet connection when it breaks down for this leads to embarrassment with students and happens a lot here. We don't have a good infrastructure for the Internet compared to European countries."*

This view conflicts with that of the small group who discussed the findings of this research who all agreed that the problem was not one of infrastructure or resources, but of levels of understanding and, perhaps, of fear.

Some other academic staff, especially the older ones who resist any change to traditional teaching and learning, feel very anxious. They also dislike the idea of

being involved in Internet-based learning in the future. Why do some academics not integrate the Internet into their instruction? Gilmore (1998: 19) showed in the case of the US that: "The reasons include fear of change, lack of time, lack of knowledge about information technology resources for specific course content, and rapid changes in hardware and software development."

In Saudi universities and higher institutions, many users are beginners or do not have any idea about computers and the Internet or how can they use Internet-based learning and training effectively. It is easy to answer this question when we take the developed countries' experiences into consideration. Designers of specialist learning and training programmes design high-quality, interactive on-line technology courses. In addition, according to WEBIC (the first source of information for online learning developers and users), they try to make its tools easy to use and available for all academic staff and learners (undated :online). On the other hand, according to Kurtus (a chief executive of Kurtus Technologies and The School for Champions), there are a lot of courses via the Internet that have been designed and written by amateurs. The risk is this will make teachers and learners confused and they will decide to withdraw from these courses (2000: online).

The point is clear: both anxiety and confidence among academics in using the new tools of e-learning is directly related to the level and quality of the technical support available to them.

4.3.1.3 Confidence of Saudi academic staff

Their confidence in using the Internet in their teaching is shown in Table 4.21. They were asked to what extent academic staff have the confidence to incorporate the Internet into their instruction. It can be seen that more than three quarters (85.2%)of academic staff thought that they are sure they could learn the language and skills of computer-based learning. However, only (23.9%) of academic staff agreed or strongly agreed and 46% were undecided about whether they would deliver advanced distance Internet-based training courses. A minority of respondents (17.7%) believed that the challenge of developing training courses via the Internet does not appeal to them, while 42.7% of them were undecided. Finally, less than half of respondents

(48.1%) were undecided while only 44.9% thought that they had a lot of self-confidence when it comes to working with distance Internet-based training courses.

Table 4.21: Confidence of Faculty Members in Using the Internet in their Teaching (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
The challenge of developing training courses via the Internet does not appeal to me.	21	9.5	66	30.0	94	42.7	31	14.1	8	3.6
I do not think I would deliver advanced distance Internet-based training courses.	18	8.0	50	22.1	104	46.0	45	19.9	9	4.0
I am sure I could learn the language and skills of computer-based learning.	1	.4	1	.4	32	13.9	145	63.0	51	22.2
I have a lot of self-confidence when it comes to working with distance Internet-based training course.	5	2.3	10	4.7	103	48.1	84	39.3	12	5.6

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

The responses of interviewees about their confidence in using the Internet in learning and training processes are summarized in Table 4.22.

Table 4.22: Confidence of Academic Staff (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
I have the confidence to provide Internet-based training.	24	100	-	-	-	-	-	-

Overall, both questionnaire and interview findings show that Saudi academics are confident about the Internet. However, most of the respondents demand and need to be qualified before they start to teach through the Internet.

These findings point to the fact that most of the faculty members of Saudi universities have positive attitudes towards incorporating the Internet into their instruction

However, a few of the respondents thought that e-learning will reduce the need for staff members, and they are afraid that they will lose their jobs. Therefore, their confidence is low. This is an important point, which links the expansion of e-learning to the economic rationale of reducing the numbers of academic staff. It could be argued, however, that the development of extensive e-learning provision to meet a growing demand from students will require many more academic staff.

The policy implications of this point is important: if e-learning is to be accepted by academic staff, they must be encouraged to see it as something that will not threaten but will actually improve their job prospects. Many academic staff do not see it this way at the moment. Once again, it becomes clear that the development of e-learning is not just dependent on technology or curriculum change but requires subtle changes in the attitudes and commitments of academic staff. Both are related to academic employment conditions.

Furthermore, in Saudi Arabia, academic staff and even Saudi employees in the public sector are not well motivated to develop their skills and education or to engage in professional development. The incentives for doing so are said not be great. The problem is to find a better framework of incentives and support in the workplace to encourage employees to change. The environment in which people work must change to improve attitudes to training and development.

4.4 Conclusion

This chapter has presented a brief overview of the Saudi educational system. It focused also on Saudi academics' awareness of the new technology. It has shed some light on integrating information technology (computerization) into learning (education and training) processes in general. Finally, it has interpreted the attitudes of Saudi academic staff towards the new learning technologies.

We have found that while the most striking characteristic of the Saudi educational system is the priority of Islam at all levels of education, this is no obstacle to the development of new systems of teaching and learning using new technologies.

Nevertheless, it is highly important for the government to realize that the Saudi educational system has encountered many serious problems in all educational levels, particularly in higher education. The Ministry of Information (1994:54) pointed out that although education in Saudi Arabia is at the top of the list of priorities in the country's planning for development, it has to look for better solutions to these problems in order to avoid creating new problems such as graduate unemployment.

Fortunately, Saudi academic staff in general are enthusiastic and keen to use new technology in higher education. They do not feel anxious about working with it and have the confidence to do so. These findings will help policy makers promote the use of information technology in universities and colleges.

This chapter has shown, however, that this must be done sensitively with an understanding of how academics work, how they see themselves and how they perceive the possibilities of using the new technologies.

CHAPTER FIVE

ADVANTAGES AND DISADVANTAGES OF E-LEARNING (TRAINING) IN HIGHER EDUCATION

CHAPTER FIVE: ADVANTAGES AND DISADVANTAGES OF E-LEARNING (TRAINING) IN HIGHER EDUCATION

5.1 Higher education via the Internet

Universities are at the centre of the global, digital revolution and the emergence of the 'network society' (Castells, 1996). It is not clear how they will change in future. They could become centres for 'distributed learning' (Lea and Nicoll, 2002) and change profoundly as a result. Or they may, as Castells (1996) argued, remain much as they are because they meet the needs of elites seeking a traditional form of higher education. Certainly, the Internet opens up new possibilities for them and in the developed societies much is changing in the organization and work of universities (Cornford and Pollock, 2003).

If there is lack of clarity about those matters in the developed societies, it is hardly surprising that in Saudi Arabia there is even greater uncertainty. How that is resolved will depend to a great extent on how academics view the future possibilities of e-learning and on how the government and Ministry of Higher Education see the future of universities.

The material to be presented shows that Saudi academics are enthusiastic about the new technology of learning. On the other hand, there is also evidence that their academic roles are defined in ways that limit their ability to make full use of its possibilities. Universities are under a great deal of pressure to enrol more students. Academics have heavy teaching responsibilities that limit their time for research. At the moment there are few incentives for academics to engage in curriculum development and many feel, too, that they are much too busy to extend their work into providing courses of training and professional development for those who are employed and are not full time undergraduate students.

It is government policy that universities should play a stronger role in national development and that Saudi higher education institutions should benefit from being more involved with new learning technologies. The concern to train more technicians, to Saudize the labour market and to promote vocational training, has led

the government to support the development of private universities. These new institutions can teach only in the sciences and in technology and are intended to absorb the large number of students that currently cannot enter the state universities. Competition from the private sector is intended to encourage the state institutions to change.

This is background against which to interpret data from this research. More than that, feedback from those interviewed has enabled the researcher to feel confident that the interpretations are reasonable. One colleague set out, for instance, the rationale for the Saudi government's interest in e-learning. His comments are very revealing. They show how the government perceives other organizations in the kingdom, especially the universities and how the government believes they should change. He put it this way:

> *"The government organization's attitude is to adopt the e-government programmes. All these attitudes aim at creating a learning environment in addition to creating an administrative, an economical, and a commercial one. At the IPA there is an attitude among the decision-makers to adopt distance learning and training. This means we have an environment that accepts the electronic attitude in the IPA. Other organizations have their own problems, for instance the universities have their problems regarding their big size. They have the technology and the infrastructure, but it is not the right infrastructure. They have the Internet service, which will solve some of the learning and training problems. This is especially true for those who find it difficult to reach the training centers in Riyadh, Dammam or Jeddah. Moreover, the IPA has formed an internal committee to consider the introduction of distance learning processes using Internet technology and the Institute infrastructure technology. The IPA is considered among the advanced centres in the area of using the modern technology of general remote conferences. We have a network connected directly with the World Bank that helps us to get some of the lectures we need via communication satellites. This project is ready but the execution has not begun yet."*

These pressures put Saudi academics under great stress to change how they think about their roles and about what roles universities can play in relation to national development goals. It is important, therefore, to understand what academics think about these new technologies and the changes taking place in universities. At the same time, it is important to understand how Saudi academics understand what universities are and what their role in society is.

This is not uniquely a Saudi problem. Throughout the world higher education systems are changing rapidly and models of the university that once offered higher education to only relatively few people are under great pressure to change to be able to meet the needs of mass enrolment in higher education. At the same time, in an age of what Barnett (1999) has characterized as 'supercomplexity' i.e. where on a global scale all forms of knowledge are subjected to constant criticism, universities find themselves at the centre of the major cultural and intellectual changes of the modern world. However, Bleakley (2002: 107) notes that "Learning without Walls" – something made possible by computers – cannot simply mean information sharing. Social contact and the development of "Communities of practice" improve e-learning environments.

There is an important and particular cultural dimension to these changes in Saudi society. It concerns the role of women in relation to education. The new technologies promise real change in their learning opportunities. It is not surprising, therefore, that the broader social consequences of e-learning are quite frequently discussed in relation to the changing position of women. Special attention is given to this in this chapter because this issue provides a good opportunity to discuss a range of factors that are shaping Saudi higher education, its role in society and how universities are part of a wider cultural change in the kingdom. An important conclusion to emerge is this: Saudi academics are positive about the future possibilities of e-learning and training. They hold such views to a considerable degree because they believe the new technology will bring real benefits to women and in doing so will benefit the society as a whole. They realize, too, however, that there is a balance to be struck between the old and the new, the traditional and the modern and they all agree there is a need to protect the values and religion of their society at the same time as they engage with the ideas and technologies of the global economy. It is important, therefore, to gain some view of how Saudi academics consider these issues because they become part of their reaction to new technologies and to the world that these open up.

Feedback from those interviewed has enabled the researcher to feel confident that the interpretations are reasonable. One colleague said:

"The new method will provide women with more training opportunities and men also, but the opportunities for women will be greater due to the unique position of women in this country and their close connection to their homes. So if the arena is opened to women they will have more chances than men. Moreover, the new method will override the traditional methods of training because it will save the trainee the travel and other problems."

However a decision maker stated that:

"I think the provision of equal opportunities is controversial. Some positions are limited to men only and some are limited to women only, but they are few compared to those for men. Therefore there will never be equal opportunities."

This is an interesting comment from a senior Saudi official; a statement that is presented as fact but which nevertheless reflects a profound belief that the social order of Saudi society will remain stable. He does at least acknowledge that this is a controversial theme.

5.1.1 E-learning (training)

Adults who are seeking to continue higher education believe that the fast growth of the Internet and the demand for education have made electronic learning (e-learning) a very attractive option. Most of the experts in the world predict that e-learning will grow in the next decade. Cohn, a journalist for the Industry Standard Magazine Online, pointed out that in 1998 almost three-quarters of universities and colleges in the USA offered online courses. Moreover, he believed that in 2002 more than two million students will enroll in e-learning programs in the USA (2000:online).

E-learning via the Internet will enable teachers anywhere to reach any student at any time. According to Wilson, a member of Lotus's world-wide Education Advisory Council in the UK, it is a common view now that, "E-learning is being presented in the marketplace as the next evolution of the training and education industry and the next phase in the digital revolution" (Wilson et al, undated: online). Nowadays, in the USA, the number of companies which are offering e-training has reached more than 5000 (Cohn, 2000: online). These are global trends. Saudi Arabia is sharing these trends with other countries. For example, the Arab Open University (AOU) was established in 2002 as a private Arab institution of higher education. It was

supported by Saudi Arabia. Now, it has nine branches in different Arab countries. The university uses the new technology to provide learning and training to learners through printed material, Internet-based learning and other media. Moreover, it has an established telecommunications network linking all of its branches in the Arab countries. During the next five years, the Open University aims to enroll 40,000 students in all its branches (Arab Open University, 2002: online).

As a result, people have to shift in their thinking about teaching and learning processes in higher education. McConnell (2000:188) states that this change is happening at various levels. For instance, nowadays there is a shift from conventional, face-to-face learning in universities as they integrate some types of e-learning.

According to McConnell (2000:189): "In the United Kingdom, the Dearing Report of July 1997 (the most important policy document on higher education in the United Kingdom since 1963) emphasised that communications and information technology will play a very important role in the future of higher education."

He also highlighted that the Dearing report (1997) mentioned that "For a full and successful integration into learning to take place, staff need to be effective practitioners and skilled in the management of students' learning through C&IT. For the majority of students, over the next ten years the delivery of some course materials and much of the organization and communication of course arrangements will be conducted by computer." Johnston and Webber (2003: 335-352) discuss the concept of information literacy and how this idea is very important in the information society. They argue for information literate students and information literate universities, where all staff, including librarians, promote information literacy.

Branch and Fitzgerald (2000: 55) outline many factors, which are necessary to promote the development of the Internet in education:

1. It is necessary to know detailed e-learning plans and plan for appropriate funding;
2. Teachers have to know how to deal with the Internet and how to integrate it into the syllabus;

3. Management must encourage staff of the organization to promote the new e-learning atmosphere;
4. Support is needed from parents, businesses and society so that learners can use the Internet in the activities of higher education;
5. Assistance and provision from government is a requirement through financial support and suitable regulation, to promote e-learning in higher education.

Such views are commonly expressed in the literature – often web-based literature – that has grown up. The danger is that it over-simplifies the problems to overcome in developing such systems. As will be seen, the development of such technologies of learning has to take place in organizations and through the work of people that are often very conservative and who have other kinds of interests and concerns.

The evidence from this study – the relevant literature, interviews and questionnaire data – revealed that there was agreement that there are many advantages of using e-learning tools for both teachers and learners. Table 5.1 shows most of the academic staff were found to have positive attitudes toward the usefulness of e-learning tools.

It can be seen from the table that the great majority of respondents (82.7%) showed that the use of e-learning tools helps provide a better learning experience for trainees. More than sixty seven percent (67.3%) of respondents believed that the use of e-learning tools makes the trainee feel more involved. Moreover, the majority of respondents (58.3%) thought that the use of e-learning tools creates more interaction between trainee and instructor and among trainees themselves, especially through video and audio conferences, which connect many people with each other. More than thirty percent (30.9%) of respondents were undecided about how instructor-trainee interaction would develop. This result is not surprising. It is not possible to predict the change that will take place.

In general, these findings indicate positive attitudes toward the usefulness of e-learning tools in the learning (training) process.

Table 5.1: Perception of the Usefulness of E-Learning Tools

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
The use of e-Learning tools makes the trainee feel more involved.	2	.9	9	4.1	60	27.6	122	56.2	24	11.1
The use of e-Learning tools helps provide a better learning experience for trainees.	1	.4	6	2.7	32	14.2	139	61.8	47	20.9
The use of e-Learning tools creates more interaction between trainee and instructor.	10	4.5	14	6.3	69	30.9	100	44.8	30	13.5

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Table 5.2 further supports this view.

Table 5.2: Attitudes Toward E-Learning Tools (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
Use of e-Learning tools will help provide a better learning experience for trainees.	23	95.8	-	-	1	4.2	-	-
Use of e-learning tools will create more instructor-trainee interaction as well as interaction between trainee and trainer and among trainees themselves.	18	75	1	4.2	5	20.8	-	-

95.8% of the interviewees agreed that use of e-learning tools would help provide a better learning experience for trainees. And 75% of the interviewees deemed that use of e-learning tools would create more instructor-trainee interaction.

It is well-known that e-learning (training) is very useful for individualized instructions, as discussed previously (see Chapter Four, page 165). Moreover, the Internet can improve the range, if not always the quality of communication between teachers and students.

In fact, e-learning tools will promote cooperation and learning among trainees themselves. Indeed, e-learning enables students to collaborate among themselves, helping each other to learn. Among employees in the workplace, this same effect of e-learning is possible. Adults will be able to share ideas and learn from one another and they will be able to relate this learning to their work because, as responsible adults, they know what they need to know. They have more enthusiasm for learning because they make links between their work requirements and their learning needs.

Fuks et al (2002: 23) confirm this in their article and show the important findings and obstacles that faced the development and delivery of online course. They conclude that Internet-based courses can improve the learning and training process in different ways, such as accessibility to curriculum content and increasing the interaction between students and teachers.

But overall, it is not the technology of e-learning that makes the new way of teaching effective. It is the fact that the technology encourages the development of new kinds of communication and learning between people.

These positive comments are interesting. It has to be remembered that Saudi academics often teach in organizations where there are many students and few opportunities to talk to them individually. Also, there is a tradition throughout the Arab world of teacher-led teaching in which students are not encouraged to participate actively in their learning but are expected to accept the authority of their teachers. It might be expected that these traditions would be strongest in Saudi Arabia. This research shows that academics are very willing to think about teaching in different ways.

For example, Internet-based learning will serve a lot of groups, particularly those groups of people that fear meeting face to face with others. As one of the academic staff stated:

> *"The personal contact in the learning process will always be the stronger in interaction. Moreover, distance learning will serve a group of people which fear meeting face to face with others. For example, a shy person who fears asking questions, will be fine when dealing with a computer and writing his question via the e-mail. To confirm that, many Saudi university girl students*

who study through circuit closed TV do not contribute through the telephone, whether it is shyness or unwillingness, the Internet may encourage many of them to contribute."

The results of this study are in agreement with many studies. Seaberg, an American academic, argues that, on the one hand, almost everything that can be done in a traditional classroom could be done in the Internet classroom, and possibly more. Courses through the Internet allow trainees and instructors to see and talk to each other in the online classroom in the real-time (1999:1, online). However, Woods and Keeler (2001: 263) think that integrating instructor-initiated audio and e-mails in teaching and learning processes might raise learners' participation and improve the relationships between learners and academic staff and among learners themselves.

The question of teacher-learner interaction goes to the heart of many debates about the value of e-learning. Not surprisingly, there are different views among academics in Saudi Arabia. Some see no problem and, indeed, believe the quality of interaction between teachers and learners will improve. In this context, a male academic interviewed stated:

"E–learning tools will increase interaction between academic staff and trainees or students but it depends on the quality of programmes."

On the other hand, another academic thought that:

"I believe one of the positive aspects of traditional learning is the interaction between teacher and student coming face to face with different experiences."

Such views are commonly expressed. It is paradoxical, however, that they are because the actual experience of academics in modern universities with many students is that the opportunities for 'traditional' teaching are not great. Those who support what they think of as traditional teaching methods are living in a world that has probably already disappeared.

Some of the respondents thought that the efficiency – in the sense of the quality of interaction between teachers and students – of distance learning and training will be less than that of traditional learning and training. They believe the physical presence of teachers and learners will build motivation for the individual. Contact at a distance may be boring. As one of the interviewees said:

> *"The psychological effect remains essential and important and plays an important role. I think the issue of physical presence will increase motivation for the individual. Distance contact may be boring for a human being when repeated twice or three times."*

This is a common view. Many staff believe that face to face learning encourages questions and answers and effective learning. Saudi academics, unlike their colleagues in other parts of the Middle East e.g. Egypt, where there are overwhelming numbers of students enrolled on courses, have experience of relatively small classes with students whom they are likely to know personally. This is true, for instance, for academics working in the sciences, particularly high prestige subjects like medicine and engineering where student enrolments are tightly controlled to keep numbers low and improve the quality of graduates. It is possible, therefore, that some staff will regard e-learning as something that will devalue the quality of teacher-student interaction in higher education.

Using the Internet in education means time and space barriers are removed for learners. As one of the Saudi academics interviewed stated:

> *"The most important advantage is saving time and solving the problem of geographic movement from one place to another. Moreover, the person can learn according to his own speed and capability of learning. In addition to that, he may learn from his own home or his place of work or any other place."*

This kind of teaching approach may increase the number of students, whether undergraduate or postgraduate, who desire to continue their education. McConnell (2000:192) and Baer, a senior policy analyst with RAND Corporation (1998:online), claim that e-learning (further education via the Internet) does not require students to travel in order to meet their teachers, because universities are open 24 hours a day, seven days a week all year. This means students can communicate with their teachers anytime. At the same time, course materials can be updated very quickly and will be available to all students immediately.

There are problems to overcome, however. Valente (1998) and Gilmore (1998) found that in teaching through electronic mail or chatting rooms it is very difficult for students to interact with professors whom they have never met before. And Ching

(2001:191) concludes that e-mail, as a tool to make students more cooperative, does not succeed.

In some instances, teacher-student relationships are not always positive. Sometimes lack of communication will be beneficial. The learner will have the choice to be present or not with e-learning. Consequently, he/she will feel a sort of freedom, in choosing what is the most suitable time for learning. This makes learners relaxed and comfortable to ask and answer the teacher's questions. Winslow, Vice President of Federal Workshops for Shipley Associates, a leading business development training firm based in suburban Salt Lake City (1998: online) and Driscoll (1998: 157) argue that using technology in training allows trainees, through e-mail, chat rooms, and net meetings, to ask their questions freely and exchange ideas and experiences with others in real time. One academic interviewed was very keen to use e-learning tools to give the learners more freedom. He explained:

> *"E–learning tools will increase interaction between academic staff and trainees or students. Therefore, I have a point, which I believe contradicts all what other people see. I believe that the communication between trainer and trainee is not positive always. Sometimes lack of communication will be a benefit. How is that? The trainee will have the choice to be present or not, which means a sort of self monitoring, and consequently he will feel a sort of freedom, in choosing the suitable time for him. This makes him relaxed and comfortable and his productivity and attention will be parallel to his presence."*

Others may argue that the teacher-student relationship should be a personal one, for there is more to education than mere technical competence. Teachers communicate values and standards to their students and, in the traditional model of the university, close teacher-student relationships have been highly valued. E-learning represents a profound challenge to these traditional views.

These points indicate some of the ways in which Saudi academics are currently thinking about e-learning. They debate whether it will improve teacher-student interaction or lessen it. They wonder whether these new technologies improve motivation to learn or depress it. Like academics elsewhere, their views are formed from conversations with colleagues, reading and personal experience in trying to use the new technologies.

If e-learning is to develop in a society, those with the power and resources to influence that development must have a strong sense of what is possible in this field and of what will be possible in the future. They must be able to look ahead and try to anticipate the future. This requires a particular attitude of mind. This forward-looking attitude can only develop and be sustained in contexts where people talk to one another, share ideas, discuss development and work to achieve it. This requires leadership. In the absence of the right kind of leadership, people are likely to be fearful of change and maybe resist it.

In this way, the questionnaire data is contextualized; more than that, feedback from those interviewed has enabled the researcher to feel confident that the interpretations are reasonable. The development of e-learning and training is clearly related to the ability and understanding and leadership of people in positions of responsibility. One colleague of the group discussion highlighted this when he said:

> *"If they believe and they want to, they can do it, but the issue is about needs adopting the idea and having the will. Other than that there is no problem. The capability is there and if you look at the budget of the universities you will see huge amounts of money. But these amounts should be directed according to the belief and conviction of the man in charge."*

5.2 The impact of the Internet aspects on teaching and learning in higher education

The Internet offers more interactivity within e-learning and costs probably less than traditional higher education, particularly in universities and colleges. The fast growth of information via the Internet is creating a new atmosphere for education. Consequently, the role of the teacher is extended beyond the classroom and the school or college. This means that the teacher's role is going to be to support students in different ways compared to traditional face to face experiences. In addition, the skills of face to face teaching will have to be converted into systems of e-learning (Leask, 2001:91). Thorpe, in her paper, supports the view that courses through the Internet increase the need for learner support. Therefore, the author recommends that the design of Internet courses should focus on learner support and course content. Online teaching and learning offers learners an additional and a powerful means to gain their goals (2002: 105).

It can be seen from Table 5.3 that more than ninety two percent (92.2%) of the respondents considered that the Internet offers flexibility of time and place in learning. Also 91.4% and 89.2% of faculty members thought that computer-based learning offers a rich variety of learning resources. Moreover, 83.7% of faculty members thought that the Internet is a tool to promote cooperative learning among trainees themselves and help in the development of trainee-centered education.

More than eighty percent (80.1%) of participants considered that computer-assisted learning is a cost-effective way to make education and training accessible. In relation to the advantages that the Internet offers for adult education and training, 78.1% of respondents agreed or strongly agreed. The table also shows that about 70.3% of faculty members believed that Internet-based teaching and learning is a good way to solve practical problems at work quickly.

Table 5.3: Perception of the Advantages of Online Training and Teaching (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
The Internet offers new opportunities for adult education and training.	-	-	6	2.6	45	19.3	141	60.5	41	17.6
The Internet will help in the development of trainee-centred education.	-	-	2	.9	40	17.3	146	63.2	43	18.6
Computer-assisted learning is a cost-effective way to make education and training accessible.	1	.4	4	1.7	41	17.7	137	59.3	48	20.8
The Internet offers flexibility of time and place in learning.	-	-	-	-	18	7.8	146	63.5	66	28.7
Computer-based learning offers a rich variety of learning resources.	1	.4	2	.9	17	7.3	142	60.9	71	30.5
Real-time updating of skills is a great advantage of distance Internet-based education.	2	.9	1	.4	38	16.7	134	58.8	53	23.2
Real-time exchange of opinions is a great advantage of distance Internet-based education.	-	-	-	-	25	10.8	142	61.2	65	28.0
Internet-based teaching and learning is a good way to solve practical problems at work quickly.	2	.9	4	1.7	63	27.0	125	53.6	39	16.7
The Internet is a tool to promote cooperative learning among trainees themselves.	-	-	2	.9	35	15.4	149	65.6	41	18.1

(*) Frequency

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

With regard to the interviews, the findings revealed that all interviewees (100%) thought that there are many advantages of Internet-based learning (training) courses; while 91.7% of them thought there are many disadvantages as well (see Table 5.4).

Table 5.4: Advantages and Disadvantages of the Internet-Based Training Courses (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
There are many advantages of the Internet-based training courses.	**24**	**100**	**-**	**-**	**-**	**-**	**-**	**-**
There are many disadvantages of the Internet-based training courses.	**22**	**91.7**	**-**	**-**	**-**	**-**	**2**	**8.3**

For the moment, however, it is important to note this: Saudi academics, in general, have a clear awareness of the future possibilities of the new learning technologies and a sound understanding that they impact directly on the quality and character of teaching and learning and make possible the access of whole new constituencies of learners to further education and training.

In the following section, the advantages and disadvantages of integrating the Internet into higher education will be discussed.

5.2.1 Positive aspects of the Internet on teaching and learning in higher education (advantages)

According to Thomas and Williams (1999:132), the Internet has a huge amount of knowledge and information on an enormous variety of themes and subjects. Consequently, the Internet has great potential as a resource for teachers and students.

In over two decades, teachers who can use computers and access its services will provide students with more new skills, new knowledge and information.

It is possible to see the impact of the advantages of using the new technology in the teaching process. Interviewees in the course of this research have supported the view

that the Internet has enormous possibilities regarding information and data. In this respect, one of the academics interviewed said:

> *"The main advantage is that the Internet opens wider horizons whether increasing knowledge or obtaining new and updated information or in distance learning which is an important axis where you can provide this service anywhere without gathering them in one place. Another advantage, I believe, is that it could quicken the training programme because it can provide the service to people in distant places at the same time without affecting their work, if certain times were allocated. I believe distance training may bridge the gap in traditional programmes and provide the service to more employees."*

Taken as a whole, the findings of this study disclosed positive attitudes on the part of most of the participating Saudi academics towards the advantages of Internet-based learning (training) courses.

An interviewee from the Institute of Public Administration emphasized the role of the new technology at different levels for Saudi employees and Islamic society as a whole:

> *"There are many benefits. One of them is to sharpen trainee skills in using this service and give him the knowledge enrichment he needs which is an important aspect in this process not only at the local level but at the Arab and Islamic level."*

This raises an interesting question: are there differences between the prevailing discourse about e-learning in the Oriental and Occidental worlds? In the Islamic world, there may be an interest in using IT to promote political solidarities and religious values. This is much less likely to be so in Europe or the USA, where e-learning is justified largely on economic grounds. Certainly, it is difficult for Saudi academics to talk about these matters without thinking about religious values and the changing roles within Saudi society, especially in relation to women.

A female academic from the College of Science at King Suad University stressed that online learning and training will fill the gap in the shortage of faculty members:

> *"It will solve the shortage in academic staff and will increase the number of students, which is limited due to the limited number of labs and classrooms, in addition to enhancing access to information."*

The shortage of academic staff is a serious problem in Saudi higher education, especially in relation to women staff and students. This shortage arises from the fact that higher education is a relatively new experience for women and their traditional roles in society still encourage them to build their lives in the home. Given high birth rates, even among educated women, it is difficult for women to combine home life with their careers. Female academic staff experience this as a problem: that they lack adequate support and opportunity to develop their work in the university.

5.2.2 Negative aspects of the Internet on teaching and learning in higher education (disadvantages)

The positive views of the Internet among Saudi academics in education have been indicated. There follows a discussion of the negative perceptions. The first point to stand out concerns the need for training in IT before learners can really benefit from e-learning.

The following quotations from the interviews present a rather clear picture of the importance of prior training. A male interviewee emphasized the importance of IT training:

> *"As regards disadvantages, there must be prior training for using the technology. If there is no prior training the student and trainee will become a negative in trying to get the information they need. You may imagine the existence and availability of information, but the student can't find it because he is not able to manage the means of reaching it. This is a big problem not resulting from the academic staff, but from the student not having enough training.*

In addition, there is concern about a lack of communication and exchange of opinions, attitudes, and suggestions from the students when teachers teach them through the Internet. To make learners communicate more and more, the teacher must create a good learning environment and learning materials in order to motivate students.

It is well known that some disreputable organizations can sell academic qualifications or provide poor quality courses on the Internet. This is a concern for

some academics in the kingdom. One of the academics I interviewed has confirmed that:

> *"There could be some disadvantages relating to authenticity. Will the student get the quality of the required education? Will he really learn? Will he carry out all the training required? One of the disadvantages is that if someone not suitable was in charge the results may be contrary to what is expected."*

Another one supported him:

> *"The major disadvantage in distance learning and training is when the courses have been designed in a bad way."*

This means that quality assurance and academic standards are very important issues. Students and trainees require confidence in the quality assurance of online courses. This will guarantee that e-learning meets academic standards and provides a good quality-learning environment.

Some academics are clearly anxious that e-learning might lead to a loss of jobs in university teaching. One faculty member said:

> *"Maybe the most negative side is that the need for staff members will be reduced, and I am afraid we will lose our jobs. I mean instead of our need to have many doctors, one of them will communicate with twenty or fifty thousands of learners and this will affect the number of employees."*

In addition, as another interviewee argues, the problem in Saudi society is that there are a lot of Saudi people who still do not digest information technology, especially educated people.

This is a very important point. The labour market of Saudi Arabia is inflexible. Graduates are expected to take graduate level jobs. There are, at the moment, (and there has been since 1991), high levels of graduate unemployment. In addition, many graduates take a long time to find a job. Under these circumstances, they are unlikely to take seriously their need to improve IT skills (though it would be in their interests to do so) because they do not feel the need for it. They use IT for recreation purposes, not personal or vocational development. The general point is this: motivation to continue to learn through IT is related to employment opportunities. There must be a need and an interest that can be satisfied. If neither exists, people will not become e-learners.

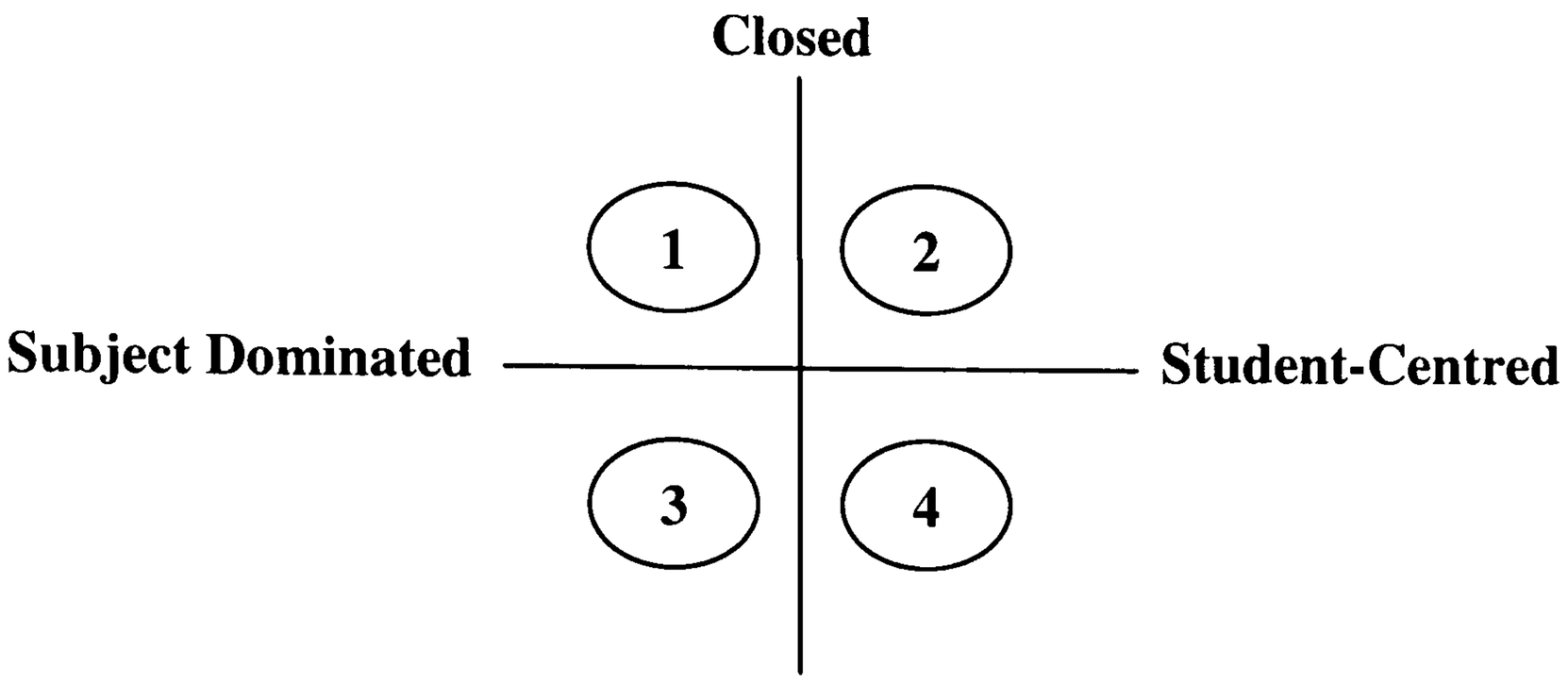
Such points could be extended. There are many different negative opinions about e-learning within Saudi academic life. Some are well-founded, some are a reaction to fear of the future, some are simply ill-informed. Behind all the conversations about these matters in Saudi universities there are some fundamental cultural issues that influence ideas and attitudes about education policy and curriculum development.

Therefore, some basic changes are needed in the thinking of people in society if e-learning on a large scale can develop. Decision-makers have to know what is going on in the wider world and in the way IT is being used. Such changes will need long-term investment of new resources. This will help people change their styles of learning and of working. Above all, the government must help people face up to a future that will require them to use IT and understand better that a new economy will be needed as well. This implies a profound cultural change in ways of thinking.

From this point, without doubt, e-learning requires government support to guarantee standards, especially curricula. The implication is clear: if IT education is supported, people – many different groups of them – will be able to learn continuously throughout their lives. But if e-learning curricula are too tightly drawn, too narrow in their design, this will limit what students can achieve. On the other hand, the Internet offers people the chance to discover new domains of knowledge that are not limited by time, place or resources. Access to these new horizons is likely to depend upon the design of the curriculum, on whether it encourages passive learning of what is already known or innovative, exploratory discovery of that which is not yet known.

In Saudi Arabia, there is a danger that course designers and students will remain in the world of what is already known, for their main interest, it has been claimed, is in acquiring qualifications and certificates. Therefore, there is a need to encourage change in their thinking about the nature of learning and its possibilities. These possibilities might be conceptualized as follows (Figure 5.1):

Figure 5.1:Types of Curriculum



Different attitudes towards teaching and learning will result in very different kinds of curricula design for e-learning. The real promise of e-learning is that it opens a new world to students.

It may be the case, for example (quadrant 1) that academics who are guided by a strong sense of their subject and its intellectual requirements – whose main concern is to teach a subject – may be more interested in traditional didactic teaching where students are carefully guided in their studies. E-learning (though not exclusively) offers a different possibility: that of a student-centred approach in which students can follow their own interests (quadrant 4). It is likely that the positions academics adopt in relation to these criteria will shape their views about the advantages and disadvantages of e-learning.

Forsyth (2002: 251) describes the experience of online courses, which offer professional development for academics. The findings showed that, at the present time, academics were not prepared for online learning. However, the writer believes that it is not difficult to design a high quality of online courses for employees that agree with their needs. This finding could apply to Saudi academics.

Vocational training is considered by some to be one of the areas not likely to benefit from distance learning and training. In general, this is not true, but they are, of course, correct to note that in Saudi Arabian IT, e-based learning is not widely seen as being relevant to those who work with their hands. There is no reason for this to

be the case. Skills can be improved through e-learning methods. More to the point, however, people can be improved and given new opportunities for self-development. There is no reason why those who work with their hands cannot follow other kinds of study – philosophy, history, religion or whatever – using the resources of e-learning.

However, one interviewee had this say:

> *"It may be that trainees and students will get lost in the huge sites in the Internet which will lead to a waste of their time."*

This is a very important point about the use of the resources of the Internet in teaching and learning and it is deemed another disadvantage of using the Internet in teaching and learning. There is an unimaginable volume of information about any academic topic in any academic field. Students and teachers have to know how to discriminate within it; to know what is valuable and what is not. How can they do this? They have to be helped to develop their critical-analytical skills, their sense of what is good work and what is bad. They have to be aware of the important ideas and developments within given fields of study. If they are being helped to this understanding in the course of an Internet-based learning programme, the programme must be designed to make sure it happens, otherwise students will get lost and waste their time.

The development of such ways of thinking is considered in western societies to be the most important feature of higher education (Barnett, 1990). In the Arab world, such a view is not so common. The development of such thinking is, however, necessary. There is a danger, though, that many will think this is the responsibility of government. In fact, it is a wider problem with deep cultural roots. In the absence of a discussion or understanding of this broad problem, people remain trapped in their worries about particular issues. For example, one of the academic staff said that:

> *"If distance learning begins it will not be recognized for a long period of time, and therefore it should begin after application and the government should support it and it should be taken seriously, or else it would be like acquiring a degree through correspondence, which is not acknowledged by anyone. Therefore, if there are fixed controlling standards and seriousness in distance learning, I think it would be useful."*

This issue is important and has a general relevance. It is interesting that this man saw this problem as being solved in government when, in fact, it is a wider cultural problem.

The quality of courses in education and training, particularly higher education, is guaranteed in different ways in different societies. In developed western societies, this is achieved through close cooperation between universities, the professions and government-supported quality assurance agencies. Such frameworks lend professional and increasingly international recognition to the quality of courses. This framework does not yet exist in Saudi Arabia, where the Ministry of Higher Education judges the quality of courses, and this may slow up the development of good, internationally recognized, quality assurance procedures.

These general points about attitudes can be easily made. To explore them further, however, we need to consider whether the differences of views about IT among academics can be explained by reference to other differences such as those of age, gender and specialization.

The results of this research clarified that there are some factors which explain observed differences of attitudes towards e-learning in in-service training among Saudi academics.

In this research an attempt was made to examine the importance of differences among Saudi academics in relation to the variables of age, gender and academic specialisation. These differences may help explain how Saudi academics think and how they may respond to change in their working environments.

There are good commonsense reasons to think that younger academics will welcome the new technologies more than older ones; that women might be more enthusiastic than men; that scientists have stronger interests in using IT than arts specialists. It might also be thought that high status academics with years of experience might be anxious about the changes taking place around them.

To explore these ideas, the questionnaire used in this research asked academics to respond to a series of statements. The statistical tests applied to their response (see Chapter Two) revealed, however, that the reality is more complex. Let us discuss these key variables in turn.

5.2.2.1 Age significant differences

The one-way analysis of variance (ANOVA) in conjunction with the Scheffe's test comparison were employed to determine to what extent the faculty members' ages may have a significant effect on the attitudes.

Table 5.5 shows that there were significant variations in two factors. Firstly, anxiety ($p = .0547 > 0.05$), the Scheffe's test indicated that there were no significant differences between the two means at the 0.05 level of the two groups (this is one of the limitations of Scheffe's test that sometimes it does not give a definitive answer). Secondly, usefulness of e-learning tools ($p = .0164 < 0.05$):

Table 5.5: Variations of Attitudes of Faculty Member Toward In-Service Training via the Internet by Age

Factor	Source of Variation	D .F. *	Sum of Squares	Mean Squares	F Ratio	P
Anxiety	Between groups	2	2.0970	1.0485	2.9442	.0547#
	Within groups	217	77.2787	.3561		
Usefulness of e-learning tools	Between groups	2	3.6599	1.8299	4.1881	.0164#
	Within groups	217	94.8154	.4369		

(*) Degree of Freedom
 # A Statistically Significant Difference at 0.05 Level.

The Scheffe's test results, as seen in Table 5.6, show that significant differences at the 0.05 level in the e-learning tools mean score among age groups of faculty members existed between respondents in the age range of group two (31– 40 years) and respondents in the age range of group four (more than 50 years) for the benefit of

group two. In addition, significant differences in the e-learning tools mean score existed between respondents in the age range of group three (41–50 years) and respondents in the age range of group four (more than 50 years) for the benefit of group three. Younger academic staff had positive attitudes toward the importance of e-learning tools as a result of dealing with IT more than older academic staff.

Or, the related variation might arise as a result of the fact that the percentage of respondents, 44.7% and 42.6%, who represented group two and group three respectively, were high, compared to the percentage of respondents of group five which was only 10.2%.

Table 5.6: Scheffe's Test for Differences in E-Learning Tools Mean Score by Age of Faculty Members

Age	Mean	1- (20-30)	2- (31-40)	3- (41-50)	4- (More than 50)
1- (20-30)	-	-	-	-	-
2- (31-40)	3.8013	-	-	-	*
3- (41-50)	3.8384	-	-	-	*
4- (More than 50)	3.3939	-	-	-	-

*** Indicates significant differences**

There is a likely link between age, computer literacy and willingness to use the new technology. Traditionally educated people are likely to resist new technology. This refers to people who have finished their studies in Saudi Arabia. Older people are more likely to expect young people to work on the computer on their behalf. The people in question only feel comfortable with older methods of teaching and learning. They trust the old methods more than the new ones. They believe they do not need anything new.

On the other hand, competence at IT is not equally distributed throughout the society. Younger people are often much better at IT than older ones. This is true of the academic world where students may be much more effective in working with IT than their teachers. In societies where academics attach a high importance to their status – and this is true of the Middle East – it is hard for them to acknowledge their weaknesses in relation to IT. Many, for this reason, will feel anxious about using this technology. It will expose their weaknesses in ways that would humiliate them.

According to Burkhart (1998:online), the young generation in Saudi Arabia tends to be more technically educated than the old generation, more cosmopolitan, and more open to new ideas. In the light of this result, it could be applied to academic staff as well. In contrast, Laal (2000: 192) argues that there are not significant age-related differences between Saudi academic staff regarding the importance of using the Internet in the learning process. The differences between this study and that of Laal can perhaps be explained by reference to the time they were carried out. Laal's work was done when the Internet was not widely used in Saudi Arabia.

5.2.2.2 Gender significant differences

The findings of this study showed that there are no significant differences between the attitudes of university academic staff toward in-service training via the Internet with reference to gender. To obtain a more complete picture, a further test was carried out, a T-test analysis, in order to compare the attitudes of the two groups (male and female) towards e-learning and in-service training. The accepted "p" level of statistical significance was $P < 0.05$ confirming there were no differences between the attitudes of men and women.

There are no significant differences between the means of the two groups, male and female, in their attitudes to the information technology training which they had received, and their evaluation of their training.

Colleagues were asked about issues like curriculum change, co-operation among higher education institutions and teaching using these new technologies. In each case no significant differences emerged between the attitudes of men and women (see Appendix G).

These observations are consistent with the findings of other studies in other Islamic countries. Zakaria (2001:46) discloses that there are not any significant differences between male and female academic staff in terms of using information technology in instruction in Malaysia.

However, this result is not compatible with some studies. Laal (2000: 192) reveals that there are significant differences in the attitudes of Saudi academic staff towards the importance of using the Internet in the learning process according to gender. Male academic staff believed that there would be big differences in using the Internet in the learning process between men and women because Saudi male academics are familiar with the use of closed-circuit TV (technology) to teach female students. Moreover, Phares (1999:11) argues that males who have enrolled in online courses participate 50% more than females.

Against this, Niemczyk (1998), writing about the US, found that women and older faculty members are willing to incorporate technology into instruction.

The differences between Laal's (2000) study and this research (including observations about gender in other countries) are perhaps again explained by timing. Much has changed over 4 years in Saudi Arabia since Laal's study. The Internet is now widely available and more people – both men and women – know about it.

5.2.2.3 Significant differences according to specialisation

Further analysis shows that attitudes towards the roles of men and women in the new technology differ slightly according to academic specialization.

The questions in the questionnaire prompted responses concerning a range of factors that might distinguish the attitudes of men and women towards the Internet in education. These were examined according to academic specialization. No significant differences emerged in respect of such features as enthusiasm for the new technologies or anxiety about their use. No differences emerged concerning views about the ways in which the new technology would change Saudi society or, for example, the productivity of academics.

In table 5.7, the gender issues factor with significant differences are presented, with the means and standard deviation for two groups of specialization (art and science). The findings show that there are no significant differences between the means of the two groups of academic staff specializations, except in relation to a number of points

concerning opportunities and the role of women in higher education. The statistical results can be summarized as follows: Gender issues in using the Internet ($3.9454 < 4.0779$, $t = -1.52$ and $p = .017 < 0.05$).

Table 5.7: Comparison of the Attitudes of the Faculty Member Toward In-Service Training Via the Internet by Specialization

Factor	Variable	Number	Mean	Std Dev*	T – value	2-Tail Sig**	P-value
Gender issues in using the Internet	Art	122	3.9454	.748	-1.52	.129	.017#
	Science	107	4.0779	.566			

(*) Standard Deviation
(**) 2-Tail Significant
P < 0.05
 # A Statistically Significant Difference at 0.05 Level.

Academic staff in science have more positive attitudes than academic staff in the arts about gender issues in using the Internet. That means academic staff in science colleges did not see any difference between male and female academic staff regarding using IT in the teaching process, while those in art colleges see otherwise.

This is not surprising. Scientists are more familiar with technology. A scientific education at postgraduate level – especially abroad – depends upon using these new tools for research. Both men and women educated in science are likely, therefore, to be positive in their views about the willingness of women to use these new technologies and to see considerable benefits to them from doing so.

Colleagues were asked to comment on the way e-learning will affect curricula – especially in relation to professional development and training – and the capacity of Saudi institutions to work together to develop new kinds of courses. It is a question relevant to whether or not a *community of practice* of academics who are interested in e-learning is likely to emerge in and among Saudi universities. These are all matters that touch deeply the future development of Saudi universities. Once again, no significant differences emerged when the views of arts and science specialists were examined. Across faculties, therefore, there is a willingness to accept the changes the new technologies will bring about.

It has to be noted that this finding is not consonant with Laal's study (2000: 192), which revealed that there are significant differences between Saudi academic staff related to their academic specialism. The academic staff in science believed that the Internet would significantly change the learning process in higher education. Once again these differences reflect the different periods of time in which the studies were carried out.

This research has shown that differences among academics in their views about e-learning are not great. Older academics in arts subjects are more likely than young scientists to be cautious about the Internet and about the possibilities for e-learning in higher education. But these differences are not great. In general, academics are supportive of the new technologies of learning. Their main worries concern the best ways to implement and support change.

The foregoing argument has indicated the advantages and disadvantages of e-learning (training) and the Internet. The effect of the Internet on the role of Saudi women will be examined in the next section.

The question of the role of women in Saudi higher education reveals further dimensions of change, which challenge many aspects of policy and practice in higher education.

5.3 The effect of the Internet on the role of Saudi women

One of the advantages of using the new technology and the Internet in Saudi society is that they have helped Saudi women to discover the world and find their freedom through it. To makes this point very clear, it is important to understand the role of women in Saudi Arabia by knowing the status of women in Islam. According to the Saudi Arabia Information Resource (undated, online), "Under Islam, women are accorded respect and rights, which, until relatively recent times, were denied to the vast majority of women in the west. Whether single or married, under Islam, women are considered individuals with their own inalienable rights. Their property rights are protected, even within marriage, and the woman keeps her own name after marriage."

Islam considers motherhood one of the essential responsibilities of women. But women have worked outside the home, too. Before the discovery of oil in the farming communities, men and women worked side by side as an essential need for survival. At the same time, all Saudi women were dependent wives or daughters. Wives are charged to raise children and to care for the home. In other words, they are primarily full-time wives. This, for the most part, led to less education for the women.

However, with the country's development and the increasing population, and despite the fact that women's work in Saudi Arabia has been limited by culture and tradition, there is now an increase in women's participation in the workforce. Though it is still low at the moment, it is planned to grow. For example, Al-Rasheed (1994:23) noted "Only 35,000 women (27,000 Saudi women) participated in the labour force in 1975, that is 2.2% of the total labour force. However, by 1980 this figure had risen to 4%, and in 1990 the female participation rate in the labour force was 5.3%...the current plan estimates a 5.5% participation rate by 1995." However, Bourland, Chief Economist at the Saudi American Bank, states that in 1999 Saudi female participation in the labour force increased to 14.6 % (2002:online).

Al-Ghannam (1987:55) has noted that the development of education and higher education in Saudi society has changed a lot of customs and social habits concerning women's work. This has led to an increase in the number of educated women that participate in the work force. Al-Baadi supports the view that the emergence of educated Saudi women has changed many concepts about the role of women in the society without contradicting Islamic law. For instance, women want to have their own jobs, complete or partial financial independence and more freedom of movement and decision. The growth of the Saudi economy has enabled many women to achieve their goals. The labour shortage in the state especially encourages an increasing number of educated women to have jobs and thus financial independence (1982:139). But there are only a limited number of jobs that can women do, such as teaching and medicine. Even though nearly half of the population is women, more than 80 percent of women employees work in the educational sector.

However, there was a debate about the roles of Saudi females in the labour market between Saudi liberals who want women to play a big role to improve the society and conservatives who try to maintain limits on women's work. It is worth discussing their different viewpoints.

On the one hand, Dr. Faisal Al-Basheer (liberal), the Deputy-Minister of Planning, wrote: "I do not think that there are any laws in the country which forbid women to work. Let us be frank: the problem in a woman's employment stems from whether she works in those areas and fields which society considers inappropriate from a religious and social point of view. I think that it is necessary that we take this (social resistance) into account: we cannot change the customs and traditions of a society regardless of the problems we are having in manpower" (Al-Basheer, 1980, cited in AL-Hazzaa, 1990:66).

On the other hand, Shaikh Iben Baz (conservative), the highest religious authority in the state, said in his Fatwa "I have been acquainted with what was published in the local newspaper... about the intention of the Bureau of Civil Service ...to employ women in government departments to do typing, interpretation, and other clerical jobs... it is known that woman's descent to work in the field of men leads to interaction ... which is a very dangerous matter that has its own grave results, bitter fruits, and dangerous consequences. It is also contrary to Sharia (legal) clauses, which order women to stay in her home and perform the jobs, which concern her in her home and the like where she is far from interaction with men. It is also contrary to plain, well-referenced legal (Shari'a) evidence which prohibits a man from being alone (khulwah) with a non-related women and from looking at her and which ban all means which lead to falling into what God has prohibited ... the labour shortage is not to be solved by involving women in men's jobs... the right solution for it is to create incentive for the thousands of young men who do not find in government work enough incentive to join it, so they leave it and go to business and private establishment and companies. The start of a correct solution is to simplify the procedures of employee placement, application review, and in paying an employee what he deserves for his effort" (Iben Baz, 1980, cited in AL-Hazzaa, 1990: 67).

However, nowadays, as a result of integrating the new technology and the Internet into Saudi society, people in Saudi Arabia, especially women, have extensively used these technologies.

In a feedback discussion, one of the decision makers interviewed said:

> *"I see that men and women will both benefit. As regards maintaining their identity, I don't see any problem in that. Even during the time of the prophet Mohamed, peace and blessings be upon him, women practiced their daily life among men and had respect and dignity. In cases where women can't leave their homes because of some reasons, then they can use e-learning. But to be fair, women, because they are always at home, may better benefit from this technology."*

This is an interesting comment. He sees many possibilities for the development of women's education through e-learning, but his perception of these possibilities is framed in social and religious terms. This way of thinking is inescapable in the kingdom.

These aspects of the changing position of women in Saudi society form the background to questions put to academics in this research. Through both questionnaires and interviews, colleagues were asked about their views about the new learning technologies and the ways they might be used by both men and women. These issues are very important in the context of all discussions of how the country can further develop and achieve its social and cultural objectives of building a modern society within the framework of Islam.

5.3.1 Gender issues

Data from the questionnaires and interviews of this study revealed that most of the respondents stressed that there is no difference between men and women in their ability to provide help on distance Internet-based training courses. Table 5.8 presents data about academic staffs' responses when they were asked about gender issues in using the Internet to train employees in Saudi Arabia. It shows that the great majority of academic staff (82.2%) agreed or strongly agreed that they anticipated that distance Internet-based teaching and learning should offer women as many opportunities as men for career development. Also, more than eighty percent of

respondents (80.8%) expected that it is likely in the future that women will play as important a role as men in developing distance Internet-based teaching and learning in higher education. While 73.7% of academic staff showed that men and women are just as capable as each other in teaching through the Internet.

Table 5.8: Gender Issues in Using the Internet to Train Employees in Saudi Arabia (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
Men and women are just as capable as each other in teaching through the Internet.	1	.4	7	3.1	52	22.8	111	48.7	57	25.0
Distance Internet-based teaching and learning should offer women as many opportunities as men for career development.	3	1.3	4	1.7	34	14.8	126	54.8	63	27.4
It is likely in the future that women will play as important a role as men in developing distance Internet-based teaching and learning in higher education.	2	.9	1	.4	41	17.8	125	54.3	61	26.5

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

With respect to the interview data, Table 5.9 displays the responses of interviewees about gender issues. In more detail, almost 88% of the interviewees did not see any differences between men and women in their ability to provide help on distance Internet-based training courses. 75% of academic staff interviewed agreed that distance Internet-based teaching and learning should offer women as many opportunities as men. The majority (83.3%) of them believed that women in the future will play as important a role as men in developing distance Internet-based teaching and learning in higher education.

Table 5.9: Gender Issues in Using the Internet (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
There are differences between men and women in their ability to provide help on distance Internet-based training courses.	-	-	1	4.2	21	87.5	2	8.3
Distance Internet-based teaching and learning should offer women as many opportunities as men for career development.	18	75	1	4.2	5	20.8	-	-
Women in the future will play as important a role as men in developing distance Internet-based teaching and learning in higher education.	20	83.3	-	-	4	16.7	-	-

5.3.1.1 Differences between Saudi men and women

In the main, most of the Saudi academic staff, whether male or female, have a positive attitude toward gender equality. Some of their recorded observations are as follows:

> *"There are never any differences. I may even say that some women may outwit men. Women sometimes may have the spirit of challenge. I have witnessed this in the women's branch of the Institute of Public Administration and among women's colleges in the university."*

> *"There doesn't seem to be any difference, as far as I am concerned, but individual differences are always there between men themselves and women themselves."*

Sometimes women might have more ability than men, as this female interviewee said:

> *"Believe me if I tell you that women may have greater capabilities than men, because they possess zeal and eagerness more than men. As for the Internet, it will suit women totally, because it is nearer to the traditions of the privacy of women."*

Another indicated:

> *"I don't see any difference; on the contrary, I believe women sometimes outwit men. So I don't see any difference, except in the way one is trained and that is applicable to men and women."*

Other faculty members provided similar responses:

> *"Women could be brilliant at using the Internet and the new technology and especially e-learning."*

> *"With regards to the mind there is no difference, but there maybe some personal differences, such as providing more time for men to spend on the net. Generally, there are no mental differences, but differences in efforts and desire to learn."*

> *"There is no difference, but the issue depends on the person himself, whether he is a male or a female. If someone has the chance he will be the best regardless of his sex."*

However, another saw it from different angle:

> *"In our country women and men have their own position. Men may have more opportunities than women. So if there is any difference it is not in acceptance or capabilities, but in the fact that one has opportunities and one has not. As regards capabilities they are relatively similar, but I cannot guarantee that, because this issue needs measurements and studies to be conducted. But generally, men are subjected to experiences different to those of women."*

These results are encouraging; they conform to the principles and policies of general education and higher education in Saudi Arabia. One of the main principles of the educational system in Saudi Arabia is recognizing women's right to obtain suitable education on an equal footing with men in the light of Islamic laws. Regarding higher education, the main policy of the Saudi model of higher education is that all citizens in Saudi Arabia get the same opportunities in higher education, without any discrimination, according to individual potential and scientific abilities.

Feedback from one of the decision makers interviewed confirmed that. When he was asked about the opportunities e-learning offers to women, he said:

> *"If we talk about the IPA as a training organization, it will definitely provide women a big opportunity. We have one centre in the kingdom for training a woman, which is in Riyadh, while we have 3 branches for training men in Jeddah, Riyadh and Dammam. That means men have better chances of getting training, but if we introduce e-training and learning, women will have equal chances."*

It is difficult in practice to achieve these goals. Cultural norms encourage Saudi women to stay at home and it is virtually impossible for Saudi women to travel away

from their families. This limits their access to training opportunities. The new learning technologies, however, can overcome this problem. They offer a way forward to help women to train while protecting their religious status and identity. Saudi women who work in different sectors and employees in remote areas cannot come to the Institute of Public Administration. According to Al-humili, head of the Computer Science Department in the IPA, the Institute is planning to use Internet-based training to train them (2001:29).

5.3.1.2 E-learning (training) opportunities

With regard to the question, should distance Internet-based teaching and learning offer women as many opportunities as men for career development, seventy- five interviewees answered positively, while about 21% disagreed. These are some typical comments:

> *"This will help them keep pace in the context of a traditional, conservative society which restricts women in travelling abroad alone or to access training or learning."*

> *"Women are in special need of equal chances in our society. On the contrary, these chances should be attainable by women more than by men, because that will solve a lot of problems for them."*

Indeed, for the most part, as one of the interviewees mentioned, in postgraduate studies women are more eager than men to study sciences. this is as a result of traditional and conservative circumstances, which enables to them have enough time to study and to take study more seriously than men. Moreover, Islam doesn't differentiate between male and female in acquiring science and developing skills.

Consequently, women outperform men in education across all subjects. There are some subjects they cannot enroll in e.g. engineering. But they can do science and the evidence is that women are taking science courses and performing well in them. This is a fertile background on which to build e-based further education and professional development. Although many women will remain at home – for traditional reasons – they are not necessarily denied opportunities for further learning by doing so. It might be expected, therefore, that the groups in Saudi society most likely to take up opportunities for work-based learning and professional development will be women.

Prummer (2000: 177) has focused on the difference between female and male access to and control over a range of information technologies. She revealed "Women's preference for personal interaction and significantly poorer access to technological resources." But she stressed and thought that women could benefit from online learning in order to improve themselves in all aspects of life.

Feedback from those interviewed has enabled the researcher to feel confident that the interpretations are reasonable. One colleague from the discussion group, for instance, when given the information that most academic staff members (who responded to the questionnaire) agree that the method of e-training will provide women with better and more equal training opportunities, added:

> *"The new method will provide women with more training opportunities and men also, but the opportunities for women will be greater due to the unique position of women in this country and their close connection to their homes. So if the arena is opened to women they will have more chances than men. Moreover, the new method will override the traditional methods of training because it will save the trainee the travel and other problems."*

However, there were some interviewees who were not sure or did not think that distance Internet-based teaching and learning should offer women as many opportunities as men for career development:

> *"The training programmes provide the service according to the percentage of those who need it. We know that the percentage of men is twice that of women, so it will never be equal. But it should provide the service to whoever wants it, no differentiation between men or women."*

One of the female doctors thought that:

> *"Because it is designed for men, they get most of the chances related to employment development and training. That is the real situation in the kingdom. If women have the same chance, the benefit would be bigger, since they feel excluded from these training courses and as such, they would be more motivated."*

The reality of dealing with training opportunities in relation to IT are greater for some groups in Saudi society. Those who benefit most and have the greatest chances for learning are: men in employment (especially in the private sector but including those in well-managed public organizations), those who are better educated and those who live in urban areas. It is important that these differences are taken into account by staff in universities when they think about the future possibilities of developing

new kinds of courses and curricula using open distance learning. The Watani project (Discussed in Chapter Seven) is an important initiative to promote IT. Given the complexity of training markets, however, Watani will only succeed if it is carefully developed, with appropriate training and rewards and changes in many organizations.

5.3.1.3 Saudi women play crucial role

The responses to the questionnaire reported here have to be seen against the wider cultural background of the society. There is clearly a problem in Saudi Arabia – as in many other societies and perhaps especially Islamic societies – to make sure that modernization is managed carefully from a cultural and religious point of view. It is not surprising, therefore, that there are differences of opinion and some uncertainty about how this will be done. It is not strange either that women are enthusiastic about the possibilities for education that now open up to them.

This research showed that, regarding women's role, 80.8% of respondents of the questionnaires expected that it is likely in the future that women will play as important a role as men in developing distance Internet-based teaching and learning in higher education. Besides, twenty of interviewees (83.3%) stated that women in the future will play as important a role as men in developing distance Internet-based teaching and learning in higher education. Some of the reasons behind this opinion were as follows:

> *"I don't see any problem in that, on the contrary, women are expected to play an active role in learning and training. A woman is originally a teacher to her sons and children in the home."*

A female academic was very keen and she believed that:

> *"I believe yes, there is no difference between men and women. If they get the chance to develop themselves in a way that will not contradict the traditions and habits of the society, there is nothing that forbids females from developing and getting this type of education."*

This finding indicated that Saudi women are expected to play an active role in learning and training. Women can be part of the learning and training revolution and the new technology. While acknowledging the traditional Saudi perception of women as homemakers, it turns this social and cultural fact into an educational possibility.

By contrast, 16.7% of the interviewees disagreed in regard to women's role in developing distance Internet-based teaching and learning in higher education:

> *"Yes, I believe women could not play the same role as men. Because of the number of female academic staff is low by contrast to male academic staff. But maybe in the future it will appear something new. Who knows?"*

> *"No, I don't think so, because in our country there will some sort of difficulties at the beginning. But in the future I don't know what will happen. But in the beginning, I think men will play role more than women, because the nature of women is that they are shy, modest and timid, they are afraid that might go due to contact and friction with men."*

A male academic highlighted the effect of the Islamic religion on Saudi society. He said:

> *"I doubt that. In our society the social and religious dimensions may not encourage women to accept the idea of contacting or communicating with a man and let him hear her voice. If we exclude the women teachers who teach female students and consider the aspect of her development and her conducting studies and researches, she will be augmenting the process of distance learning. In fact, she may be more capable in her area of specialty than a man."*

In general, on the basis of this research, there is a good chance for both males and females in Saudi Arabia to continue to deal with the Internet and e-learning as much as they can. In addition, the Internet may give Saudi females more confidence in the light of the fact that most of them are educated and the rate of illiteracy among them is low. At the same time, it will help them to work even if they stay at home.

5.4 Conclusion

All people whether scientists, professionals, businessmen, researchers, or students can communicate easily, sharing information, and cooperating through the Internet. As a result, the Internet has become an important part of the infrastructure of a modernizing society.

There are many advantages of using the new technology in learning and training processes, but there are many disadvantages as well. There is no doubt that the Internet presents opportunities for learners who cannot study in traditional classrooms. Providing access to study in e-learning environments is, however,

difficult to attain. On the one hand, an e-learning environment through the Internet can create new communication links to overcome remoteness, and physical barriers within or between countries and sources of information. On the other hand, it needs a good infrastructure of communication and academic staff and learners who have an interest in using the new technology in the learning (training) process.

In order to be active and effective, e-learning needs educational change both in learners and teachers. Learners have to take responsibility for their own learning. Teachers should adapt their expectations and practices to assist students who do not live in or near colleges.

It will change the structure of universities and the nature of academic roles within them. These changes are taking place and are happening very fast in Saudi Arabia. What this chapter has shown is that there are no real obstacles to these developments among academics in Saudi Arabia. University teachers have a key role to play in developing e-learning and training. This study has shown that their attitudes towards this are positive. Even in that feature of Saudi society – concerning the role of women – where attitudes that would resist change might be expected, what was found was the opposite. Both men and women – though perhaps, particularly women – were clear that the new technology will benefit both groups and that the development of the kingdom in the future made it necessary to ensure this happens.

Change does not happen by itself. It has to be given a lead. At the macro-level of policy-making there is a commitment to change. At the meso-level of the management of universities it is not clear what should be done, although much change is taking place. There is not as yet a good framework of collaboration among academics to help them become an e-learning community of practice, but they are willing to develop their careers in this direction.

CHAPTER SIX

CONSTRAINTS AND OPPORTUNITIES IN INTERNET-BASED HIGHER EDUCATION

CHAPTER SIX: CONSTRAINTS AND OPPORTUNITIES IN INTERNET-BASED HIGHER EDUCATION

For the most part, e-learning and training implementation policies have concentrated on technical issues. However, the human element is very important and is the most influential aspect of any technology solution to training needs. Infrastructures of communication and information technology can always be upgraded or replaced, while changing the attitudes of people is very difficult and requires great care and effort.

In order to make e-learning (training) programmes successful, technical procedures must be dealt with. On the other hand, it also depends on the people who use them and who feel confident that they can receive constant updating, information, learning and training programmes anytime they want, delivered to them in their workplace or at home, via the Internet. However, if employees do not understand the principles of networked learning both trainers and trainees will not use the technology effectively. An academic interviewed from the College of Engineering stated that:

> *"There are a lot of Saudi people who still do not digest information technology, especially educated people."*

However, it is widely accepted that organisations in the future will need to concentrate on investment in employees through learning and training, in terms of both developing and maintaining appropriate skills. Investment in training must produce effective benefits. This benefits both public institutions and private companies.

As a result of the increasing demand for e-learning, universities and higher institutions in the developed countries are finding ways to meet this demand.

In the course of doing so many new kinds of courses have been designed, often in collaboration with major employers. This has resulted in new organizational structures in universities, such as flexible learning centres (King, 2002). It has resulted, too, in new kinds of research and systems for knowledge development and transfer (Jacob and Hellstrom, 2000). Some writers suggest that the on-line

environment changes ideas about the nature of learning and of teaching (Mayes, 2002).

In Saudi Arabia, because the picture of e-learning and training is not clear, in order to understand how such initiatives might succeed, it is necessary to first understand the obstacles that will result in failures.

In relation to the obstacles that prevent the development of e-learning, there was agreement among the small group that discussed the findings of this research that the problem was not one of infrastructure or resources, but of levels of understanding and, perhaps, of fear. One of the academics involved put it this way:

> *"As regards the communication infrastructure, if compared with the neighbouring Arab countries, our communications are far better and more modern, and more capable. Therefore, I don't think it constitutes any problem or obstacle to e-learning or training, or at least it is not the main obstacle or first one."*

This chapter will consider the obstacles in using the Internet in learning and training processes in Saudi Arabia. Firstly, difficulties in Saudi society are examined. Secondly, several obstacles are presented and discussed. Finally, the distinctive problems of relating e-learning to academic teaching in Saudi Arabia are discussed.

The aim of the chapter is to show that the development of e-learning is either helped or hindered by the ways in which a number of interacting issues are managed. These concern:

- The role of IT in the country's development planning;
- The development of the IT infrastructure;
- The management of support services for academics;
- The management of the conflicting demands made upon university resources.

These issues give shape to the circumstances in which academics work. They constrain what is possible in the field of course design and curriculum development. They determine whether academics will be willing to change and provide teaching in new ways.

Given present day circumstances in the kingdom, it is not surprising that academics remain enthusiastic about e-learning but concerned and frustrated about what they can and cannot achieve.

6.1 Problems and possibilities in e-learning: the international experience

The analysis so far has shown that Saudi academics are enthusiastic about developing their work in the field of e-learning. They understand that the tools of e-learning can enrich learning and training development and delivery, as well as manage the development of both. A key task for Saudi academics now is to reflect upon the conclusions of international research and experience in this field to anticipate some of the problems they might face in the future. For example, according to Evans and Nation (1996:164) the constraints of learning of time and space have been overcome by open distance learning. New types of e-learning are likely to facilitate the teaching process through new methods of teaching. This means e-learning has and will continue to change the role of academic staff from transmitting knowledge to mediating and guiding learning while learners become independent.

The international literature in e-learning, however, identifies a number of important problems that must to overcome if e-learning is to be used successfully. For example, King (2001:56) argues that if open universities are not well led there will be a risk that these higher institutions could become inflexible. Evans and Nation (1996:176) support this view and add that change in telecommunications technology is very fast. But this is not accompanied by the same change in teaching and learning processes whether in theoretical or practical subjects. Therefore, the challenge for the policies and practices of universities and higher institutions is to ensure that teaching and learning processes develop and change in parallel with changes in technology. Whether this happens will depend on the level and type of involvement of the universities' leadership in managing change.

The development of e-learning in the Kingdom of Saudi Arabia depends, in the long term, on preparing people at school to become familiar with IT. This will build the platform on which new curricula can be established in the future. But a policy to

improve school-based IT learning and training will not solve the problems of Saudi universities now. Other policies are needed to change in order to promote IT in higher education in respect of management, leadership and the imaginative development of new courses.

The work of Cuban et al (2001:1) is relevant here. They examined the experience of two high schools located in the heart of the technological revolution, Northern California's Silicon Valley. They found that "Access to equipment and software seldom led to widespread teacher and student use. Most teachers were occasional users or nonusers. When they used computers for classroom work, more often than not their use sustained rather than altered existing patterns of teaching practice. Computers, however, are not appropriate for all projects. Computer use depends on the instructor's teaching and learning goals. Yet nationally, most teachers and students are occasional to rare users or they are nonusers of these machines in classroom for instructions."

Moreover, Cuban et al (2001: 17) mentioned two important further problems: the poor communication infrastructure and continuous changing of software and hardware. The other problem related to technical support problems which could not be fixed right away.

This means even if the school has the newest technology in the world, a lot of teachers will not become serious users of new technology in their teaching.

King (2001:35) added that there are other challenges facing academic staff who are involved in e-learning such as dealing with different groups of students (school leavers) and the different languages being used between teachers and learners. Both might cause difficulties for both teachers and learners. These problems of communication can be made worse by resource constraints that produce overcrowded classrooms and high workloads among teachers. Despite its wealth, these are very real problems for Saudi Arabia to overcome. As previously explained in (Chapter Four), Saudi universities are overcrowded and lecturers feel that they have little time to plan new courses.

Ellis (2000:240) examined faculty participation in the Pennsylvania State University World Campus. He reported "Release time for faculty members to develop courses for the World Campus is very important to administrators and faculty members... In order for these faculty members to take on anything in addition to their present workload, they would have to eliminate some of what they are doing now. This is where release time plays a major role."

In some developing countries, especially poor countries, another problem has emerged: the cost of updating the communication and information technology infrastructure is very high. E-learning programmes, however, depend on it. Some universities and higher institutions for training will not keep pace with this. Moreover, the price of the e-courses has to be reasonable for learners to be able to pay the fees. The implications for Saudi Arabia are clear. Long-term planning for technology development and the sustainable pricing and costing of courses is essential.

With regard to academics it is important to teach them how to teach using new technology. E-learning tools in higher education cannot displace the teachers for they complement each other. Technology cannot make teachers redundant. For example, the Internet allows students to have new experiences and knowledge in new formats. Teachers can help the students through creating suitable materials and options. Peters (1998:155) believed that communication technology could not replace an actual discussion and argument between teachers and learners. Indeed, Peters is clear that there is a danger that distance learning technologies will result in turning learning and education into a mechanical, almost industrial process. In the circumstances of the modern world when creativity and innovation are so important, no society can afford for this to happen.

The implications for Saudi Arabia are clear; it is to develop forms of e-learning that support new kinds of working relationships between teachers and students at all levels in the education system. Saudi universities must not become factories for producing narrowly trained minds.

Peters (1998) has made another important observation. The tools of e-learning create new possibilities for people to learn in the workplace and in a range of other informal settings. The implications are profound for formal educational institutions. They need to change their relationships with other sites of learning if they are to be relevant to learners in the future. They must collaborate more with both employers and communities. Those in the front-line of innovation – Peters cites the University of Phoenix and the Fern University of Hagen – do this. They are careful, however, to build strong personal relationships with students. Saudi Arabia has much to learn from such experience, as explained in (Chapter Four), it is difficult for Saudi academics to work in such ways. University leaders must find ways to help them do so.

There is much international experience in the field of distance learning using older technologies of radio and T.V that should not be ignored. Duran (2001) has reported the success of the Mexican telesecundaria using such means to provide education to those without access to formal schools. In Saudi Arabia, educational T.V is well-used to enable female students to study in university. In planning its future system of higher education, the power of these older methods of teaching and learning must not be forgotten.

Finally, there is an important cultural point to consider in relation to e-learning. Evans and Nation (1996) note that e-learning is a vehicle for accelerating globalization and the cultural forms and ways of thinking associated with it. The reflexivity of this they argue, will change lifestyles throughout the world opening up and extending a global culture.

Saudi Arabia has nothing to fear from this. Islamic values and control over the Internet will protect the social and cultural frameworks of the society. It is important for everyone involves in e-learning, however, to understand that it must be carefully managed for it brings great changes. The most important implication for Saudi higher education is that it should be aware of these issues. They should be discussed and be researched.

More difficult to control are the wider social consequences of the Internet. Castells (2001) has argued that the Internet promotes urbanization. It can create what he calls 'the dual society' with a 'digital divide' opening up new social divisions (1996:273).

In Saudi Arabia people in cities have a much better infrastructure of communication than those in villages and in Saudi Arabia urban dwellers are in the majority. Because of its wealth and demographic profile social differences among those who live in cities are not so great as in some other Middle Eastern countries (see Chapter Four). Nevertheless, educational planners need to be aware that changes in technologies of learning can create social divisions.

6.2 Constraints in Saudi society

All societies must cope with constant change. Saudi society is no different. It is affected by the rapid and complex social, economic and cultural changes of globalization. It is important to mention some of these to understand more of the contexts in which academics work.

6.2.1 Economic constraints

The Fifth Five-Year Development Plan (1990-1995) set out the important concerns of the Saudi government in relation to development, particularly the expansion of the private sector, diversification in the economy, and saudisation. However, the Gulf War that happened in 1990-1991 required a high level of Saudi expenditure on defense materials. The fifth plan has, therefore, been affected by the expenditures related to the Gulf War. Accordingly, most of the objectives of the fifth development plan were delayed until the sixth development plan, given the Saudi government debt was about $55 billion (Cordesman, 2001a: 15).

Nevertheless, the Sixth Five-Year Development Plan (1995- 2000) strived to achieve many objectives that were transferred from the previous plan. The most important objectives are seeking to develop human resources, increase their capabilities and enhance their skills. It also encouraged the private sector to contribute in all areas of development and expansion of investment (Ministry of Planning, 1995). Cordesman

(2001b: 31) added that the Saudi sixth development plan called for accelerated saudisation and decreased the number of non-Saudi employees in public and private sectors.

In order to achieve these goals the Saudi government follows some of the new policies set out in the plan such as:

1. Studies will be conducted to evaluate promising economic deposits;
2. Exploration for all mineral deposits will be continued;
3. New investment opportunities will be identified (United Nations, undated: online).

Cordesman (2001a: 18), however, stated that the sixth plan failed to achieve some of its objectives and to make most of the reforms necessary for the plan to work. Evidently, the effect of the debt of the Gulf War, the decrease of the oil revenues and the oil crash that began in 1997 prevented the sixth plan achieving its objectives. As a result of these problems saudization is a failure, particularly in the private sector.

These economic problems affected all sectors in Saudi society. The communication and technology sector is one of them. It is suffering from many problems, such as the weak infrastructure of the Internet and communication, which leads to an inability to influence e-learning and training development in the future.

Feedback from group discussion confirmed that the communications infrastructure is considered an obstacle in the face of this type of education but it is not alone. One group member put it in this way:

> *"Definitely it is an obstacle, but not the main one. The main obstacle is not to enter into this scheme, to be afraid of it, and not knowing its technological aspects. You can also add, the absence of specialized personnel in this field."*

6.2.2 Culture, attitudes and employment

The state of Saudi Arabia still has a shortage of manpower in some fields, particularly those that need high skilled personnel such as information technology. Furthermore, other fields require unskilled Saudi manpower, for example, retail sales

or transport such as taxi drivers. If the government overcomes this shortage in the labour force in the future, it will help to achieve the most important objectives of the development plans, particularly saudization, and would help the country keep pace with the information technology revolution.

Regardless of the government's abilities to solve the shortages of the labour force, there is a problem of low productivity of the Saudi labour force in general and limited possibilities for development in Saudi Arabia in some domains. Some of these major barriers are economic in character; some have cultural roots. They include:

1. A shortage of population if compared with the size of the state. This led to the import of foreign workers, particularly in the modern sectors;
2. Most students in Saudi Arabia desire to enroll at universities instead of pursuing vocational education. Therefore, there is a great shortage of vocationally qualified Saudi workers;
3. There is, therefore, a shortage of trained manpower. Accordingly, training employees has become a national goal in the five-year development plans;
4. Underemployment, which means that the Saudi educated who are skilled in specific subjects, do not have appropriate work. Because most of them have to work in jobs unrelated to their expertise there are shortages of labour in key sectors;
5. Lack of desire to transfer from villages to cites or vice versa. Employees, for cultural and religious reasons, prefer not to change their lifestyles. This reduces labour mobility and inhibits economic growth;
6. Limited job opportunities for women, which means (as mentioned earlier) women are constrained to work in a limited number of fields such as, teaching and medicine. Those who do not work in these areas are limited in their studies for example, Arabic language and Islamic religion (Al-Idriss, 1983:22).

AL-Hazzaa (1993:154) observed, in addition, that there is a general and negative attitude among Saudis towards vocational education. The cultural preference is for academic education.

These aspects of social structure and attitude have affected Saudi participation in training in both the private and public sectors and especially in higher education. In feedback, one of the decision makers pointed out that the private sector has started to participate in higher education in Saudi Arabia. He put it this way:

> *"There are commercial universities. We have local colleges and local universities such as the Hotel Services College in Abha and the University of Prince Sultan has been announced and there are others on the way such as Aaft's College, which will become a university soon."*

In addition, they affect the use people make of the Internet in learning and, therefore, influence the future development of Saudi Arabia.

6.2.3 Culture, control and the Internet

The cultural world in which Saudi academics work is one in which religious values and practices are central. Academics must acknowledge and respect this fact. Some of them feel that the Internet is threatening in many ways to Saudi culture. Others believe that Saudi culture and traditions are too strong to be weakened by such threats. Whatever view is taken by individual academics, it remains the case that Saudi scholars, unlike their western counterparts, always have to take into account the cultural and specifically religious context of their work. It is government policy to ensure that they are helped to do so.

A male academic interviewed expressed his view about using the Internet in teaching and training. He said:

> *"I will speak of my specialization, which is Shari'a sciences; I think it will be useful. The spread of Shari'a sciences computer programmes (software) at the present time indicates the attitudes of people are changing after understanding the resulting benefits from these new sources."*

In order to protect Saudi society from dreadful web sites, the government has adopted a new policy, which depends on filtering Internet sites before they become available for Saudi users. Human Right Watch (1999:online) noted that Al-Adhel, president of the King Abdulaziz City of Science and Technology (KACST), stated that the Saudi government seeks to protect its religion and society from bad sites

upon the web, i.e. those that deal with pornography, or are contrary to Islamic religion and Saudi traditions, for the majority of Saudi people are religious.

Arabia.Com, which is a registered trademark of Arabia Online Ltd (2001: online), points out that KACST has reported that more than 95% of the sites blocked deal with clubs, books, magazines, pictures, that describe or show sexual acts and less than 5% of the sites were those that violated Islamic Shari'a (laws), political law, and the culture of the society. Filtering web sites in this way makes the speed of the Internet slow in Saudi Arabia. This is considered to be one of the main obstacles that face Saudi Internet users. It will limit e-learning and training opportunities when Saudi universities and higher institutions start to use it for training.

Saudi Arabia is not unique in controlling the Internet. Other countries do so as well. It does mean, however, that Saudi academics approach discussions about the Internet and its possibilities for education cautiously.

6.2.3.1 Obstacles to the development of the Internet in Saudi Arabia

In spite of the fact that Saudi Arabia is the richest country in the Arab world, the rate of access to the Internet is high and the Internet services are poor (Jarrah, 1999: online). This might be a significant reason to prevent users (whether companies, institutions or individuals) from using the Internet and hinder the growth of electronic commerce in Saudi Arabia.

Furthermore, the Internet Service Unit (ISU) in (KACST) acknowledges that there is no 100% dependable Internet service in Saudi Arabia. This means users must expect to face service interruptions. KACST takes responsibility for the slowness of the Internet. It has rejected many applications from subscribers to become Internet Service Providers (ISPs). Out of 70 applicants only about 30 of them got licenses to provide the Internet. Every Internet provider was allocated 125 modem ports and 15 users per modem. As the result, it is clear that the number of modem ports is very low if it is compared with the number of Internet users in Saudi Arabia (Jarrah 1999: online).

In feedback one of the decision makers interviewed stressed that:

> *"No doubt there is an urgent need for the Internet service and making it more capable and more powerful in order to reach everybody without interruption and with affordable prices, to make it accessible to everyone."*

Therefore, KACST should permit all applicants who still do not have licenses to have them in order to improve the Saudi Internet service. Also, the Saudi Telecom Company has to reduce the cost of Internet access, whether individual user or private sector, otherwise ISPs will lose their investments. Users will look for other means of Internet access, such as satellite services.

KACST and the Saudi Telecom Company (STC) try to work together to solve these problems. The Internet Service Unit in KACST (2000: online) stated that it is working to improve Saudi's Internet through doubling the hardware and has bought the best and latest Internet tools and devices. Moreover, it has good experts from some famous consultancy firms. According to Baheyeldin, the manager of baheyeldin.com (1999:online), the Saudi Telecom Company (STC) has used "Integrated Services Digital Network" to support the Internet service in Saudi Arabia. In general, nowadays, the Internet in Saudi Arabia is considered to be steadier, which means the speed of the Internet has leveled out.

6.2.3.2 Obstacles to e-learning (training)

E-learning is a form of training that is developing rapidly throughout the world. It can be used in all levels of education: general education, higher education, and continuous professional development. In-service training is the sector in which the greatest familiarity with e-training can be found in the developed countries. Experts anticipate expansion in the future for e-training in the business sector. Oblinger (2001:9) explores the impact of e-business on open and distance learning. The author reveals that the demand for online learning is increasing and many competitors are providing e-learning nowadays. He believes that "E-business can provide education with insight into new pricing models, new ways to create greater efficiencies and economies of scale as well as practices that ensure learners stay with the institution for their lifetime."

These global developments exemplify themselves in different ways in different national and cultural contexts. The expansion of e-learning takes place at different rates on account of differences of language, teaching methods, and levels of training. E-learning is a new model of teaching and a lot of academic staff do not have the teaching skills for it. Consequently, universities and higher institutions for training should provide instructors and staff with experience in order to make them able to use it effectively. Most of the academic staff interviewed in this research stressed the importance of training. One of them said:

> *"Training issues are surely important. And it is important to train the trainers and those who provide the service to others are also important. More people now have an idea about this service, but to be competent and train people on it requires more capabilities. If there are training courses to deliver to university teaching staff, and to students, that will facilitate things."*

In order to solve these obstacles, he suggested that:

> *"As to material things, financial allocations must be made. On the other hand, the problems are not limited to only that. Sometimes systems and organizations require being abreast of this technology. As for distance learning, it needs decisions, rules and systems to make it possible. For instance, we teach students who came from distant places to Riyadh. Why not provide this service to them at their locality? From a professional point of view, it is possible, and it is possible technically, but it needs the sort of regulation that provides frameworks and determines its direction."*

This man's comments reveal the complexity of the problem of developing e-learning. No matter what issue is in view – in this example, training – it is clear that all issues are inter-connected. Training cannot be separated from resources, regulations and ultimately from the imagination and attitudes of academics themselves.

Feedback from group discussion in relation to lack of training of academic staff supported this view:

> *"If someone is ignorant of something his behavior towards it will be either of two things: either a negative response (meaning he opposes it) or neutral response (meaning he doesn't like or want it). With all this, the academic staff should obtain training programmes, especially those that are heads of departments."*

Another one said:

> *"The teaching staff member need training so as not to resist the idea. His lack of resistance is helping him to be convinced of the whole issue."*

It is very important to try and understand what shapes those attitudes. The task is to relate how academics make sense of e-learning against the circumstances of their society – its values and culture – and the specific circumstances of their working environment. This task can be illustrated as follows:

Figure 6.1:Attitudes and Circumstances

Circumstances	Meaning + Attitudes	Experience and Understanding
-Traditionalism, culture, language, and control of IT **-Policy for IT and modernization** **-Need for institutional change in higher education and continuous professional development in higher education**	**Qualified and Enthusiasm for e-learning** **Concern to have more support for change**	**-Modernization and research** **-High awareness of government policies** **-Sense of change and uncertainty** **-Issues of support, trust and security**

Each of these processes is complex and need further detailed research. It is clear, however, that the attitudes among academics detected in this study are part of a much broader framework of influences than even the academics themselves are aware of.

6.3 Integrating the Internet into academic teaching in Saudi Arabia

Based on the findings of this study, it is clear that there are many obstacles facing e-learning (training) in Saudi Arabia. Some of these belong to Saudi society and Saudi people. The focus of this research, however, is on how Saudi academics perceive these issues. It is these perceptions that will shape how they think the problems of introducing new teaching technologies can be overcome. The questionnaire that forms the basis of this research contained questions about this.

Table 6.1 contains the frequencies and percentages for academic staff's replies when they were asked: what are the main difficulties and obstacles in using and integrating the Internet into academic teaching in Saudi Arabia?

More than seventy two percent (72.4%) of academic staff indicated that they needed much more specific training to enable them to use the Internet effectively, against 22.4% of academic staff who disagreed with this attitude. More than half of the respondents (52.5%) thought the costs of using the Internet are too high, while almost half of the academic staff (48.1%) indicated that they are often limited by their lack of technical knowledge in using the Internet. On the other hand, interview data revealed that more than 91% of the interviewees indicated that, in spite of the many obstacles that will face the development of IT and Internet-based training in Saudi society and higher education, they can be overcome.

Table 6.1: Perception of the Difficulties of Online Training and Teaching (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
I am often limited by my lack of technical knowledge in using the Internet.	31	13.3	74	31.8	16	6.9	81	34.8	31	13.3
The costs of using the Internet are too high.	10	4.4	53	23.1	46	20.1	75	32.8	45	19.7
I need much more specific training to enable me to use the Internet effectively.	10	4.3	42	18.1	12	5.2	110	47.4	58	25.0

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

A summary of their responses to questions about overcoming these obstacles is presented in table 6.2.

Table 6.2: Difficulties and Obstacles to Using and Integrating the Internet (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
There are many obstacles will face the development of IT and Internet-based training in Saudi Society and higher education.	22	91.7	-	-	-	-	2	8.3
Can be overcome these obstacles?	22	91.7	-	-	-	-	2	8.3

The questionnaire responses were explored in more in-depth interviews. Some of the points made by academics were as follows:

One colleague commented on financial problems:

> *"Financial support, Saudi people willingness and training are the main obstacles that face growth in such kind of learning."*

With respect to which a female academic pointed out:

> *"In spite of the fact that PCs are available in all departments, Internet connections are not in every department and every building till now. However, I may say we are doing fine though we are still in the beginning."*

The big obstacle in the opinion of academics is the poor infrastructure of Saudi communication, despite the fact that the state is very rich. For instance, one colleague noted:

> *"The most important obstacle we face now is the communication problem, especially during peak hours, which means that the communication infrastructure is not good and not adequate enough. If for instance, you want to install an educational programme it may take one hour, and in order to reach the user you need ten minutes. So in the current situation in the infrastructure of communications, the issue will be a complete failure. I have witnessed this from experience, when training my students to access some sites they wait for a quarter of an hour to receive a reply from the site we accessed. So, the problem will be more aggravated for trainees "*

But in this colleague's view there is a solution:

> *"Of course the whole thing depends on supporting communications. If the new technologies, such as communications via satellite, are employed in the right way, academic establishments may find it easier and quicker to communicate."*

Another faculty member said:

> *"The most important obstacle we face now is Internet service provider problems and incredible price."*

He suggested:

> *"To overcome these problems it is necessary to increase the awareness of Saudi people in terms of the importance of information technology in their work. At the same time, encourage them to deal with it in their work place."*

He is suggesting here that the underlying problems that must be overcome relate to prevailing attitudes towards training at work in Saudi Arabia. Behind this problem is a large one: how can changes at this level be introduced and sustained? In Saudi Arabia, government procedures are very important. Change is not imposed from above; it is discussed and researched. The government receives advice and makes recommendations. At the level of the organization, however, there are real problems to overcome. Unless change is carefully lead and managed, employees are likely to resist it. Leadership at this level is very important. Change cannot be imposed. It has to be led and managed and supported and this is best achieved through new learning and processes that enable staff to develop and change.

The need for leadership within institutions (i.e. at the meso-level) is consistent with the main findings of this study. It is, therefore, an important goal of public policy (at the macro-level) to ensure that institutional leaders are aware of the capacity and the importance of IT in promoting new forms of learning.

Feedback from one of the decision makers supported this:

> *"The only problem we face is the causal failure of the Internet. We need the infrastructure badly, in the area of the Internet and the communications networks. These two issues affect our work directly."*

However, one of the faculty members interviewed thought that:

> *"The obstacle we are facing now is the weak communication infrastructure and lack of training courses about new technology for employees every where."*

He recommended:

> *"To overcome these problems depends on the decision makers and their awareness of the importance of integrating new technology in higher education and other organizations. They should adopt and impose it on their employees."*

Another one supported him:

> *"The important obstacle is lack of training for academic staff in terms of information technology."*

Moreover, she believed:

> *"To overcoming these problems, the administration of girls' colleges should make the equipment of the new technology such as PCs and Internet connection available to academic staff and students. In addition, they have to give academic staff and students opportunities to train."*

It is interesting that both these comments have this in common: they are based on the tacit assumption that changes have to be imposed and led from above; that it is the government's responsibility to make it happen. While this is true in Saudi Arabia, academic leaders and staff members have their own responsibilities, too. The key question then becomes: do they acknowledge this? This is still an open question. Certainly, academics are very prepared to see the underlying problems in implementing change as being beyond their control, in some ways external to them.

For instance, one female member of the academic staff pointed that:

> *"One of the problems is that the Internet is considered a rare technology and not common in homes or schools. The computer is the main way for accessing the Internet, and it is not common in most places of work or homes, which in itself constitutes a problem. In addition, there is no strong policy that supports training the student or the employee or which gives incentives for encouraging getting skills and training. If these problems are solved, the Internet will be used on a large scale. The price of the Internet and the speed of accessing the Internet are also among the major problems."*

Also, she suggested that:

> *"Overcoming these problems requires a political decision and a serious political follow-up. The decision must state that the nation, with all its sectors and citizens of all ages, must have the opportunity to access the Internet. This will support the subscription in training programmes that will qualify them to use the technology."*

Another female academic went on to imply that some of these problems have deep social roots:

> *"The main problems are lack of education and poverty. To overcome these problems, I think, depends on a political decision from a higher level to be imposed on all."*

Some of the respondents thought the benefits of Internet-based learning are very low and the content of some courses might not be trustworthy. As one of the interviewees – a medic – stated:

> *"The benefit of distance learning through the satellite in medicine is very low. Why? Because it is very expensive, this is one reason. Then there are time differences between countries. If I want to learn from a US-based course, they are sleeping when I come to my work! This has already happened in our experience with links between King Faisal University and the UK. Distance learning is a source of information but you cannot trust it 100 per cent. Who is the lecturer? Maybe a student."*

Most of the respondents to the questionnaires and interviews believe firmly in the importance of good face-to-face relationships with students. This is related in their minds to the question of trust. Both academic staff and learners must trust one another. Trust is crucial as a factor determining the quality of a course. This is a view they hold strongly because some of them have had experience of open distance learning (ODL).

How can they trust these kinds of courses? The answer to this question is to ensure the quality of online courses. This relies on three factors: firstly, tight regulations; secondly, good policies and thirdly, severe entry requirements. All online courses should be designed and created by specialists, in conjunction with information technology experts. Finally, these courses have to update regularly in order to follow the knowledge explosion and changes in technology.

One of the decision makers who provided feedback about the findings of this study stressed the issue of tight regulations. He said:

> *"We have talked before about the infrastructure, which is very important, so whenever the infrastructure is there I expect that learning via the Internet is not difficult. But we need good regulations to control this kind of learning."*

However, there are people – both potential trainees and academics – who will resist new technology. Older academics only feel comfortable with older methods of teaching. They trust these methods more than the new ones. An academic from the Institute of Public Administration supported this view arguing that:

> *"The problems include people, especially old people, who resist change. They see that dealing with pens and paper in the traditional routine is very easy for them. There may be some apprehension towards such things like the computer and Internet. When organizations become successful in adapting these systems, the more accepting people will become of this service."*

These are important observations. When people are given the opportunity to experience the use of IT, their knowledge and skills will develop, opening up in their minds new possibilities for further learning and development. The challenge within higher education is to make such opportunities available. Whether this happens depends on lots of factors at different levels in the system – policy, resources, management and imagination.

This general point is confirmed in the comments of one of the colleagues interviewed. He said:

> *"I don't see any problems. In reality there are imaginary problems, which I think will be removed quickly through time. If the importance of using the Internet in learning or training is understood, problems such as the cost of subscription for many families, which can't access the Internet, will be solved by cancellation of the service costs or providing it for free. Such things will make the use of the Internet much easier and access to the net quicker. Of course lack of belief in the idea and lack of interest in applying it will constitute a major problem. I think there is a category still afraid of using the Internet and who have no faith in the positive role the Internet plays. So I think one of the problems facing our society is in the form of old beliefs which some of us cling to, that the Internet is either for passing the time or for a secondary work."*

These points though important are too general. To explore in more detail the complex world of Saudi academics we need to understand what explains variations among them in their views on e-learning in in-service training.

These variations have to be understood if training programmes are to be designed that are appropriate and effective.

6.3.1 Differences related to years of experience

Following the same procedures described in the previous chapter, the data generated from the questionnaires was inspected to see if there were significant differences among academics' attitudes in respect of their perceptions of the difficulties to be faced in Saudi Arabia in using this new technology.

Interestingly, no significant differences were detectable in relation to their experience in using IT and their evaluation of their training in this field.

The only slight differences to emerge were related to curricula change and the difficulties of online training and teaching. Academics at the extremes of the age range had different perceptions of the obstacles standing in the way of the new technology. Young academics tended to see these as something easily overcome. Older colleagues were more likely to see them as being complex and resistant to change.

In more detail, the results of this research clarified that there are some factors that explain significant differences in the attitudes of Saudi university academic staff.

Table 6.3: Variations in Attitudes Towards Higher Education and the Internet by Years of Experience

Factor	Source of Variation	D .F. *	Sum of Squares	Mean Squares	F Ratio	P
Curricula change	Between groups	3	5.6499	1.8833	3.5412	.0154#
	Within groups	226	120.194	.5318		
Difficulties of the online training and teaching	Between groups	3	10.3017	3.4339	4.5238	.0042#
	Within groups	228	173.071	.7591		

(*) Degree of Freedom
A Statistically Significant Difference at 0.05 Level.

One-way analysis of variance (ANOVA) along with the Scheffe's test comparison were used to determine to what extent the faculty members' years of experience may have a significant effect on their attitudes towards higher education and the Internet in Saudi Arabia. Table 6.3 shows if there are significant differences related to years of experience.

There were significant variations in two factors. Firstly, with curricula change ($p = .0154 < 0.05$), the Scheffe's test did not reveal that there was a significant difference among means at the 0.05 level of these groups. Secondly, in relation to difficulties of online training and teaching ($p = .0042 < 0.05$) the Scheffe's test results, as seen in the table 6.4, illustrated that the significant differences at the 0.05 level in mean scores among years of experience groups of faculty members existed between respondents in group one (1–5 years) and respondents in group four (more than 15 years). This means that academic staff with more years of teaching experience (more than 15 years) considered that higher education and the Internet in Saudi Arabia would face a lot of difficulties and obstacles in the future, while those with fewer years of experience (1- 5 years) thought otherwise.

Table 6.4: Scheffe's Test for Differences on Difficulties Mean Score by Experience of Faculty Members

Group of year Experience	Mean	1- (1-5)	2- (6-10)	3- (11-15)	4- (More than 15)
1- (1-5)	3.1523	-	-	-	*
2- (6-10)	3.1839	-	-	-	-
3- (11-15)	3.2444	-	-	-	-
4- (More than 15)	3.6117	-	-	-	-

*** Indicates significant differences**

This result is not surprising. Young academic staff realize the full possibilities of the Internet. They are familiar with the new technology.

Inspection of interview data highlights that attitudes identified from questionnaire responses reflect many features of the organisation of Saudi society and higher education. For example, it is not clear for Saudi people and staff in work organizations what the role of the Internet is in relation to training. One aspect of this, for example, concerns the accreditation of learning. One colleague noted:

"I think the biggest problem that faces the planners or those who undertake this work, is the way others see it. Do they recognize this work or not? If we relate this to the preparation of Master's or Doctorate work, through association, what would be the reaction? We have reached a certain stage where people do not recognize the problem. I think the first phase will be information and education; that this system of education and training will issue certified degrees just like the ones issued for those who attend universities. So if the government approved of this attitude and carried out the certification of education and training course through the Internet, I think nobody would have cause to look down on the system or belittle its worth."

The academic status of e-learning courses is a very important point. In general, Saudi university courses have equal status across institutions. Saudi universities tend to specialize in particular areas and the Ministry of Education regulates all. In these circumstances it would be possible for the ministry to certify that e-learning courses have the same status as traditionally taught courses.

Another, deeper issue is related to quality assurance and the changing structure of higher education. One interviewee noted that some private sector companies do not care about the quality of e-learning courses. He explained:

"The government adopts the introduction of technology in schools and is developing regulations and standards. The private sector has to abide with these standards. For example, in the production of educational programmes, no body will be allowed to produce an educational programme (software) except when he meets all these standards and specifications. There should be among these specifications, educational scientists, programmers and specialized individuals in this field. I think it will be very difficult for the government to produce educational programmes (software). And when the production comes from the private sector it will face competition. Unfortunately, the private sector will produce the programme with a small cost. When someone in the private sector wants to produce a big programme, he will not pay the money, because he will say instead of getting one million Riyals, I will get ten million Riyals on the account of quality."

Therefore, here is an important problem – the tension between market-led approaches to the development of distance learning courses and state-controlled programmes. The danger is that private organizations that develop Internet-based learning materials will seek to keep costs low and this may damage quality. On the other hand, it could be argued, that state control of course development will restrict things too much. The danger here is that courses will not be flexible or innovative or challenging and may be of poor quality. The challenge is to bring people together

from both sectors, from different specializations, to work together in creative ways to produce courses that students benefit from.

The framework to make this possible in Saudi Arabia does not yet exist. Because distance learning is undeveloped in the kingdom, the country's educational institutions – policies and practices – do not facilitate the development of the quality control procedures to allow distance-learning programmes to grow and flourish. The challenge is to help the development of new kinds of thinking and alter some traditional, cultural attitudes in education, and to do so through new kinds of training and learning, especially for academic staff.

The catalyst for this change in Saudi Arabia, given the special circumstances of the country, has to be the government. Academics will not seek to change by themselves.

There is a key role here for publicity, as one of interviewees said:

> *"The responsibility lies with publicity; it is missing in our society. Publicity does not play its role, and the result: people do not know what the Internet is or the computer or what they can provide. The information media are not doing their job and academics and teachers are not aware, and consequently they fail to transfer this concern to the new generation."*

He added:

> *"Academic staff always talked about these problems before the coming of the Internet. I used to talk and write articles for the newspaper saying we should work, train and be ready for the age of the Internet. When the Internet entered our world, they said we did not learn how to use the computer. When the computer became a reality, they said we did not learn the language to operate it, meaning, society creates problems and is not ready to learn because of the lack of personal education or personal learning."*

In order to solve these obstacles he stated:

> *"We can overcome this by general awareness, which can be conducted by the media, teachers, and academics in general."*

Feedback from one of the academic staff who was involved in group discussion, confirmed that:

> *"I think the media has a huge role to play and I believe it has been doing that for many years since the advent of the Internet. There are columns in the local newspaper specifically devoted to the Internet that addresses the*

teaching and training aspects. But more efforts are needed in different media. In all the media, from TV, radio, newspaper and periodicals there is some sort of effort being done to promote the understanding of the public in the area of the Internet."

In Saudi Arabia most of the academic staff are very thoughtful, enthusiastic and positive about the role of new technology in improving learning and education. But, in the prevailing culture of Saudi society there are no incentives to learn; people are secure in their jobs and they have little interest in new ideas or ways of doing things. This applies, too, even to university graduates and those who have undertaken postgraduate work. There is a widespread indifference to the need to improve skills in the workplace. This cultural climate does not promote an active interest in learning about the new technologies. In order to solve this indifference among people, the government has to force employees in the public sector to attend training programmes through incentives or through contracts between the government and employees.

Some of the policy makers and some Saudi people are afraid of anything new. This might delay them embarking on and applying new technology to learning and training. These problems can be solved in part and through time through the mass media explaining the importance of using the new technology in teaching and training.

In feedback a decision maker explained:

"The apprehension is there, but the issue is not in the decision-maker, because he is aware and knows the category that benefit from the new technology and the category that will communicate this to others. It is important before you bring machines and equipment, you prepare the ground with technicians and service men and operators. Therefore, you must hold training courses for all before you embark on the new technology projects. So, you must arrange this before you make any decision about the use of the new technology."

This decision maker is making an important point here: the acceptance of new technology is something that has to be planned for and supported. This highlights that problems of attitudes are never simply aspects of individual psychology but are bound up with the structure of the situation – organizational resources, technical

support, rules and values – within which people live and work. There will be no significant change in attitudes unless these wider factors also change.

The ability and need to plan ahead is something that some academics are concerned about. One commented on this as follows:

> *"No, unfortunately, we never did that, and that is our nature always; we do not prepare for events until they happen. The events must happen first and then we have a response, but to prepare is one of the things we lack, not because of deficiency in our thinking but due to the administrative organization. If you have about 14 hours of lecture work and a huge number of students to attend to and, moreover, you are supposed to attend meetings and do some research work, it becomes very difficult to coordinate."*

Therefore, academic organization may inhibit innovation because of bad management or planning. That is one thing. But there is something more complex behind it: a cultural attitude that does not encourage people to think ahead or to be strategic in their thinking. So, the tendency for people is to be complacent or even fatalistic about the future. Another feature of Saudi society is that the prevailing view of education and learning is a narrow one.

One of the interviewees thought that:

> *"Now you want to speak about distance education. This is exactly the big problem we face in our society, we think education must take place inside four walls, and the student must come to the university in person to be given a degree. Now see the issue of association, it is becoming an acknowledged thing and practiced in many universities. But Saudi Arabia, unfortunately, with the huge amounts of high schools students and the limited places in the Saudi universities, there is problems in front of association. That means they will limit education through association (part time learning), and for sure distance learning. Distance learning is one of the active methods of learning, because they believe that life, on the whole is a school and not only the universities. And you know that in our society they believe that learning means a degree, and if you have a degree that means you are a learned man. If not, you aren't. They admit that you can be a learned man without a degree in Shari'a law, because many well known Sheikhs have no degree, but even this no longer is considered."*

Moreover, he suggested:

> *"To overcome these problems or cope with them, we have to change the system, education must be given priority in development, and experience must be given an important role in getting jobs and training courses must be available in the area of skills of education, enough for the staff members.*

They should be encouraged to join and achieve certain standards every year in order to continue with the learning process."

This interviewee has had experience of western countries; he is positive about the new educational technology. He is aware that the prevailing models of higher education in the kingdom are very traditional and do not encourage part-time modes of study. The implications are that, if Saudi Arabia is to expand part-time, work-based modes of study through e-learning, it will be necessary to alter the views of both government and academic staff about the nature of a higher education. Higher education can no longer be confined to what takes place between four walls between teachers and students.

One of the faculty members of the College of Engineering concentrated on the importance of Internet connections for academic staff and every student. He said:

"I see that any thing new will be a sort of enthusiasm or encouragement for the use of the Internet, the encouragement either increases or decreases due to the feeling of its benefits or its importance. It may vanish completely after a while. I feel that we are now at the beginning of this phenomenon, at a period of push or acceleration, and we have not begun the period of digestion yet. As regards the obstacles, I think computers and connection to the Internet are not available for every academic or every student in the universities."

Besides, he suggested,

"Overcoming these problems, it is necessary to get financial support to make the new technology or equipment available for everybody in the higher institutions. On the other hand, it is highly important to encourage students to deal with new technology in order to use it with new ways of teaching and learning."

Feedback from an academic involved in group discussion clarified that:

"Some sectors provided the Internet freely which increase its use by the employees and that made it a positive factor and the cost obstacle is eliminated. Some countries with limited or simple capabilities provided the Internet freely or nearly freely to its citizens, which help the spread of the Internet."

Therefore, it is important to take the motivation to learn – or to teach – using IT into consideration. The proposition is that when people feel they are benefiting from this knowledge and their skills are improving, they will continue to work at them. On the

other hand, if the feeling of benefit declines, as it must with every user, or as the marginal gains in skill and knowledge and confidence decrease, then the willingness or motivation to continue working with e-learning tools will decrease. This proposition may explain differences in the behaviour of individuals. But it also has relevance for the work of organizations. If organizations value work with IT, this will encourage people to be engaged and to use the technology. If individuals do not engage enthusiastically, then, under these conditions, they might be asked to leave. This, in fact, is what is happening in the market now. People without these skills or the willingness to keep developing them, have to leave their jobs.

Another interviewee raised an additional and important problem for academics. She stated:

> *"I think the only thing that threatens them is that students may be faster than academic staff in learning or they may get rid of the teaching staff."*

In addition, the same interviewee suggested a solution as follows:

> *"Overcoming these problems, it depends on personal decisions, which means if you want to upgrade your skills and knowledge in terms of Information Technology you should attend technology training courses."*

But the future development of computer literacy and of new curricula in Saudi universities and colleges cannot depend on the motivation to learn of individuals. Government policies must change to create more opportunities to use IT in organizations and to support this with better training programmes. Alongside this, government can use multi-media to help people be more aware of the benefits of IT and accelerate changes in Saudi culture. It will be very important to encourage people – especially the young – to invest more in their own skills to improve their job chances. This will have to be done through appropriate policies for the labour market and for financial support to people through welfare and employment programmes. The aim must be to make the labour market more competitive. This will encourage people to invest in their own skill development.

These questions of motivation are clearly related to aspects of academic status. In this research, questions were asked in the questionnaire to enable further exploration of this relationship.

What stood out from this analysis was that there were very few differences in attitudes that could be explained by status factors.

6.3.2 Differences related to academic position

The results of this research clarified that there was significant variation in the attitudes of Saudi university academic staff in one factor, which is the impact of information technology on Saudi society ($p = .0492 < 0.05$). But the Scheffe's test did not reveal that for benefit of who the significant different at the 0.05 level of the three groups (see table 6.5).

Table 6.5: Variations of Attitudes of Faculty Member Toward In-Service Training Via the Internet by academic position

Factor	Source of Variation	D .F. *	Sum of Squares	Mean Squares	F Ratio	P
Impacts of information technology on the Saudi society	Between groups	2	1.7153	.8576	3.0509	.0492#
	Within groups	229	64.3743	.2811		

(*) Degree of Freedom
 # A Statistically Significant Difference at 0.05 Level

In general, the findings are approximately in agreement with Laal's study (2000: 192) that arrives at the conclusion that there are no significant differences between Saudi academic staff about the importance of using the Internet that are related to academic rank.

Expertise is another matter, however. In the view of some academics the absence of appropriate expertise is a real brake or progress in this field. One said:

> *"There seems to be two problems: the existence of experts adapted to the mode of distance learning and the use of technology in education. The experts are a necessity and to find them will not be an easy job, starting from early planning and preparation for learning processes. The second factor is the*

economic factor: given that technology consumes a bigger portion of revenue, consequently it requires modern costly equipments in the long term."

In Saudi Arabia nowadays, it is difficult to find those experts. The aware Saudi people worry about the supply of technically qualified staff. Recent developments in Saudi higher and further education suggest that students are now more willing to take up technical and vocational courses. They see that those who have a general higher education – often to postgraduate level – are not employed in high-paying jobs. The press in Saudi Arabia from time to time highlights these problems so that more people are becoming aware of the need to have relevant skills and qualifications. Under these circumstances, more people can be expected to develop skills and qualifications in IT. At the present, Saudis who study abroad are keen to take up studies in computing and IT.

Two academics providing feedback did not see lack of experts as the main obstacle. They said:

"Any technological project needs experts. But we must not exaggerate the value of experts in providing the technology for the people who will perform the work. One expert may be enough in one area and other experts in other areas."

"As a main disadvantage, I don't think it is one. The experts are available, but you must offer them something so as to give you their experience in return. We may also mobilize them from abroad."

One of the decision makers supported the view of the small group. He stated:

"The availability of an expert is very important, but you should know who is this expert? Is he specialized in the PC or in the area of education? As regards e-learning or electronic learning, we are still in the beginning of getting what may be called Saudi experts in this field. But for electronic learning to be available, we must have the experts."

These findings can be linked to many other studies. As Edelson (1998) found, some academic staff have resisted teaching online. In Malaysia, Zakaria (2001:54) reveals that there are many academics who have chosen to not adopt the Internet in their instruction. They have very little or no access to the Internet and they have never used it in their teaching before.

The resistance of Saudi academics to using the Internet in education derives from a feeling that there is more preparation work for them and some of them thought that they do not need to work in e-learning environment (Abahussain, 1998: 96). Wentling, a Professor at the Graduate School of Library and Information Science at the University of Illinois, confirms that teachers have to work more in this kind of learning because e-learning creates trends to individualize instruction. Such reasons for being cautious can, however, be overcome (2000:online).

Can Saudi universities offer courses through the Internet for learners nowadays? Saudi society is still suffering from IT-illiteracy. Saudi people need more time to prepare for distance learning and training. But the challenge that comes with an increasing Saudi population is that it is necessary to develop a system of education responsive to the development needs of an advanced, modern society. Forms of open distance learning and training using the Internet have a key role to play in this. It may mean, however, that Saudi universities will have to change their academic organization.

It is important to mention that some Saudi universities have had Centres for Continuing Education for several years. A female faculty member stated:

> *"The role of Saudi universities in general focus on teaching mainly and in the last few years, when the universities have established Centres for Continuous Education and Society Development, they embarked on trying to provide training courses for employees who wish to improve his skills in return for some money. In addition, universities have started to be concerned with research but it is not what we expect and academic research does not have a great effect on the society."*

These centres offer courses and training for employees or for unemployed people and sometimes for people who want to improve their language skills or religious understanding. They are open to the public – though people have to pay – and they are staffed by members of the university. The university takes no responsibility for these courses, although they allow the use of buildings and other resources. Academics are paid in addition for this work but the money for this payment comes from students. Perhaps these centres could be the nucleus of new forms of curricula, designed to help a wider range of students. IT offers them a way to develop entirely new kinds of programmes using distance learning.

6.4 Conclusion

This chapter has discussed the difficulties and obstacles that are encountered in some parts of Saudi society in relation to the new technology of learning. In fact, Saudi Arabia is considered – both within and outside of the kingdom – to be on its way to the information society. Because of this, the government strives to acquire the best information technology equipment in the world. It makes an effort to take part in western networks.

But it is important to admit that this new approach to learning (training) faces many obstacles and limitations.

In Saudi Arabia there are obstacles to overcome in e-learning such as Internet illiteracy, lack of training, lack of time and English Language. These problems will create negative attitudes among academics. As Collins (1999:85) explained, there is a relationship between the existence of obstacles in integrating the Internet into teaching and training process and academic staff's negative attitudes.

However, IT can create virtual practical sessions in any domain of expertise. For example surgical operations can be simulated, as can dissections, experimental procedures etc. The real challenge is one of curriculum development. Constraints on curriculum development in e-learning and training are not limited by the technology but by the imagination. This is, of course, a more general problem: people in Saudi Arabia have a limited knowledge of the possibilities of using e-learning and the Internet. Work is needed therefore to improve the general understanding of possibilities for education and training using these new methods as well as bringing about change in the management and leadership of higher institutions.

The lessons from the experience of e-learning development in countries outside the Middle East are clear. The development of e-learning in higher education requires technology, but success in achieving this depends on leadership, management and imaginative curricula designed by committed, well supported teachers. E-learning is part of global transformation in knowledge and culture. Policy makers and managers need to understand and discuss the implications of this in Saudi Arabia.

CHAPTER SEVEN

EXPECTATIONS OF THE FUTURE OF E-LEARNING (TRAINING) IN SAUDI ARABIA

CHAPTER SEVEN: EXPECTATIONS OF THE FUTURE OF E-LEARNING (TRAINING) IN SAUDI ARABIA

In the developed and developing countries, millions and millions of users in education, industry, commercial, and government are using the Internet. As a result of the enormous potential of the Internet, the number of the Internet users will increase dramatically in the next few years in all countries (Knapper and Cropley, 2000:142). There remains the danger, though, of the 'digital divide' and of new political divisions in the 'network society' (Castells, 2001).

No one can know what the consequences of these developments will be. It is necessary, however, to try to anticipate them so that the development of e-learning can be planned.

The aim of this chapter is to examine the ways in which both the Saudi government and Saudi academics are thinking about the future of IT in the kingdom and how they see the implications of its development for many aspects of teaching and learning in higher education. The reason for doing this is that academic attitudes towards e-learning (training) are bound up with how academics think about the future of their work and their society. Their thinking about these matters is shaped by their working practice. A key theme of this chapter concerns how they work together and collaborate. The literature on e-learning highlights that new 'communities of practice' develop when colleagues work across disciplinary boundaries (Lea and Nicoll, 2002, Cornford and Pollock, 2003). These 'communities of practice' are seen in the developed societies as being necessary and in some ways inevitable.

This chapter presents material that shows that the conditions of academic work in Saudi Arabia do not encourage the emergence of communities of practice easily. Because of this, academics are not well placed to develop e-learning and older academic attitudes persist.

7.1 Looking to the future

Saudi people and the Saudi government have high ambitions for the future of their society. To understand these it is crucial to consider the Seventh Five-Year Development Plan (2000-2004), the expectation of the future of the Internet in Saudi Arabia and specifically the Watani Project. A description of these key elements of future planning provides a background to a detailed account of academic perceptions and expectations about the future.

7.1.1 The Seventh Five-Year Development Plan (2000-2004)

All five-year development plans have considered all aspects of the economy. However, the Seventh Five-Year Development Plan (2000-2004) concentrates on the growth of a market economy in the context of Islam and the diversification of the sources of revenue for the state. It also stresses privatization, foreign investment, the development of human resources – especially through education – and technological development. The Saudi Arabian government sees that globalization, the technological revolution and the application of science are the important features of the future (Ministry of Planning: 2000b).

These general beliefs and expectations are echoed in the views of individual academics. One of the interviewees revealed for example that:

> *"There is a big development to integrate the new technology with learning at all levels in the educational system. Furthermore, there is a strong trend to apply the new technology as an educational instrument in Saudi Arabia. New technology in the education system is considered to be the important investment for any nation."*

Saudi authorities have started to adopt the new technology in most areas of Saudi society, especially in Saudi education. One of the academic staff interviewed confirmed this. He noted:

> *"In Saudi Arabia may be there are more realistic plans for the integration of such programmes. The Saudi government is now planning to integrate computer programmes at secondary schools level and intermediate level as well. I think the universities will follow suit."*

Another academic commented that:

> *"I see many regions in Saudi Arabia, such as villages, using computer technology, and most houses have computers. Now many schools in the Kingdom have computers as a part of their essential education. I don't see any problem, as long as computers are used in remote villages and in government organizations."*

According to Cordesman (2001a:19) among the major goals of the seventh development plan are the following:

1. "Diversify the economy by attaining a non-oil sector growth of 4.01% per year, expanding the role of the non-oil sector from 68.4% to 71.6% by 2004. Much of this growth to targeted towards the manufacturing sector, rather than in the service sector;
2. Increase the share of national manpower in total employment from 44.2 percent to 53.2 percent and replace 488,600 foreign workers with Saudi nationals;
3. Develop human resources and the value of Saudi nationals by expanding higher and vocational education, with an increased emphasis on on-the-job training, by increasing technical school enrollment from 33,000 to 55,000."

So the government is planning significant changes in the economy. It also strives to join the World Trade Organization, opening the economy to global pressures of competition and trade. It acknowledges in doing so that improvements are needed in education and training to bring this about.

7.1.2 The expectations of the future of the Internet in Saudi Arabia

The expectations of the future of the Internet in Saudi Arabia might be very ambitious because of the wealth of the country, the size of the population, and high capita per incomes.

Experts expected the increase in the number of Saudi Internet users to double by the end of 2002, which means the number of subscribers may be between 800-900 thousand and the number of users will vary between one million and half to two

million users. Saudi Arabia is considered to be the second state in the Arab world in terms of the number of Internet users and in 2002 it was in this respect the largest country in the area. Nasser, Secretary General of IAA Jordan and Managing Director of MediaScope states that "Everyone agrees that Saudi Arabia will be the Middle East's largest Internet market, due to the size of the population and the income per capita." (2000:online). In principle, therefore, to use Castell's (2001) terminology, Saudi Arabia will be at least in the Middle East context, an information rich society. It will be on the privileged side of the 'digital divide' in the Middle East. Where it will stand on the global digital divide is another matter.

According to Al-badr – a computer science specialist at King Abdulaziz City for Science and Technology – experts also expect the connection costs of the Internet through satellite dishes will fall, which means that it will make it available for more individuals in their homes when previously it was restricted to the corporations and rich people. Furthermore, the number of companies and government institutions using the Internet will increase as a result of falling connection costs, the expectation being that this increase will be about 30% more than in previous years (2002:online).

Internet applications will increase especially within government institutions, which deal with the public continuously. In the field of electronic commerce, they expect new governmental rules to encourage electronic commerce. They anticipate banking services through the Internet. However, Burkhart who works at Communications Engineering, Fairfax, VA, noted that the growth of electronic commerce in Saudi Arabia has encountered several obstacles such as the current lack of competition in telecommunications in the Kingdom. The Saudi Telecommunications Company (STC) maintains its control over international links to the Internet (1998:online).

This is the background against which many specific initiatives have to be considered. Of particular significance for the future development of e-learning in the kingdom is the Watani Project. It is central to this study for it is likely to have major implications for change in Saudi higher education.

7.1.3 Watani project

In Saudi Arabia, as explained, there is a trend to adopt the new technology in all aspects of Saudi life. The Saudi education system is no exception to this. Indeed, it is at the forefront of these changes. A male academic interviewed in this research put it this way:

> *"In reality, technology is becoming an integral part of the learning process not only in Saudi Arabia but on the international level as a whole. Technology has entered with all its weight. I expect, in the short term, technology will become the basic means for science transfer. In Saudi Arabia there are big projects such as the Prince Abdullah (Watani) and computer technology project in the general education of both men and women. According to my knowledge, some schools and a group of programmes have been selected to apply this technology as a phased experiment to make it indigenous in future."*

Watani is the Schools' Net Project that will connect through the Internet all Saudi schools, universities, colleges and Educational Directorate Districts and the Ministry of Higher Education and Ministry of Education. This project is going to provide every student, teacher, parent and educator with a huge number of services and sources of information. The Watani Project includes all subjects, curricula, educational references, electronic books and so on. It is aims to provide one PC for ten Saudi students. One of the faculty members interviewed confirmed that:

> *"Modern technology has entered the educational arena and its effect will increase day after day. We expect to find projects under way now that will be very effective if executed in the right way in future such as "Watani Project" which is trying to make the teaching of computer science general in all schools and other related projects."*

Saudi authorities expect that, on the one hand, this project will integrate the new technology into the teaching and learning process and will develop teachers' and students' abilities by allowing them to access new sources of information. It will upgrade the skills of students in the future in terms of information technology. The key objectives of the Watani Project are as follows:

1. "To develop students' skills by exploiting and using information technology (IT) in education. To prepare the students in an effective manner for the future;

2. To improve the teachers' potentials by employing information technology in all educational activities;
3. To provide an information environment, scientific content, and direct educational sources for students and teachers;
4. To improve the outcome of the educational process by graduating outstanding future generations of students who have mastered the use of information technology;
5. To partake in the creation of a nucleus for an advanced information technology industry in the Kingdom;
6. To create a comprehensive awareness of the benefits of employing information technology in education and disseminating knowledge of information technology throughout the society at large."

In order to reach these objectives, the Watani Project includes a national network, which covers the whole state. This network will comprise educational and scientific databases, local networks among educational institutions and departments and establish a comprehensive portal site for the Internet. It will establish school management systems (SMS), and dial-up connections to the Internet for teachers, students in general education and higher education, educational institution officials, school headmasters, administrative personnel and educational supervisors, educational experts, and parents at home (Ministry of Education, undated: online). Even if there are times in the near future when this project encounters problems, the general direction of Saudi policy is clear.

7.2 The future of information technology in higher education

It is clear that e-learning (training) will continue to develop in and to change higher education. Worldwide collaboration between corporations and universities will increase because the e-learning infrastructure will be very accessible. Throughout the world academics communicate with one another in ways that were not possible before. The technology allows for *global* communities of practice to emerge. These will bring profound changes in the organisation of academic life.

The e-learning age in higher education will bring changes in methods of teaching, in teaching roles and in the ways teachers help the students through creating suitable materials and teaching them to question the relevance of new skills and knowledge. (Leask, 2001:91). An academic interviewed commented in this respect that:

> *"In the past, the learning process had one dependable source of knowledge, that is, the teacher. Today, on the other hand, students have so many sources of knowledge, whereas the role of teachers lies in their experience and so in their capability of guiding their students. In other words, it could be said that the more sources students have, the higher their abilities to discuss the issues involved with their teachers. This in turn helps to make progress in regard to the learning process."*

Without doubt, the aim of e-learning (training) is to improve learners' abilities and knowledge and teach them new skills, which will prepare them for their future jobs. Branch and Fitzgerald (2000:92) expect that the future of Internet innovations in higher education that will be supported by technology in the following areas:

"- Facilitated asynchronous learning;

-Project-based/ authentic learning;

- Developing learning communities;

- Performance-based assessment;

- Individualized instruction."

These will enable teachers to focus on the individual learner instead of groups of students in the classroom and to have the teaching aims of analysis and exchange of ideas. This will have profound implications for teaching and learning in the universities of the Middle East where there is still a great emphasis on didactic teaching and on rote learning and remembering.

7.3 Saudi academic staff expectations of using the Internet in higher education

This study-generated information about Saudi faculty members' expectations of the future and of the changes the new technology would bring in higher education. These expectations have been examined under the following headings:

7.3.1 Saudi higher education and the Internet;

7.3.2 The changing role of the university;

7.3.3 Curricula change;

7.3.4 Cooperation between Saudi universities;

7.3.5 Perceptions of the benefits of e-learning to different constituencies of learners;

7.3.6 Training opportunities for employees;

7.3.7 The productivity of academic staff and trainees.

7.3.1 Saudi higher education and the Internet

Generally, the respondents' answers in the questionnaire were not in agreement with those provided in the interviews. The responses gathered from the interviews demonstrated that the great majority of the interviewees were optimistic about how Saudi universities and colleges could accommodate the Internet.

Questionnaire data indicated that more than half (50.6%) of the respondents believed that they were confident that in the future, universities and colleges in Saudi Arabia will be ready to offer distance Internet-based training courses. 45.5% of academic staff were undecided on this point. Approximately half (49.6%) of the academic staff considered that they were confident that, in the future, faculty members will be ready to teach through distance Internet-based courses, while 46.9% of the academic staff were unsure. 45.4% of faculty members were undecided about their confidence in the future development of Internet courses, while 33.6% of academic staff were confident about this.

Table 7.1: Faculty Members' Expectations of Online Training and Teaching in Saudi Arabia (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
I am confident that, in the future, universities and colleges in Saudi Arabia will be ready to offer distance Internet-based training courses.	3	1.3	6	2.6	105	45.5	98	42.4	19	8.2
I am confident that, in the future, faculty members will be ready to teach through distance Internet-based courses.	-	-	8	3.5	107	46.9	101	44.3	12	5.3
I am confident that, in the future, the quality of internet-based courses will be the same as non-Internet-based courses.	6	2.6	42	18.3	104	45.4	69	30.1	8	3.5

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

On the other hand, interview data revealed that most of the interviewees (87.5%) agreed that Saudi universities and colleges would be ready to offer distance Internet-based training courses in the future (see Table 7.2)

Table 7.2: Interviewees' Expectations about Online Training and Teaching in Saudi Arabia

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
In the future, Saudi universities and colleges will be ready to offer distance Internet-based training courses.	21	87.5	1	4.2	2	8.3	-	-

Here are some reasons and comments related to that view from interviewees:

One academic noted that the future development of Internet-based courses depended on how well such programmes are managed:

> *"As a concept, I think it is possible. Establishing such a big project is easy, but is there somebody capable of managing such a project? There is a big question mark."*

Another interviewee from the College of Science highlighted the need to distinguish between universities in their capacity to develop e-learning. He said:

> *"When we speak about universities, we don't speak about an equal segment or level; universities differ from one another. We have about nine universities each of which is different from the other, so I don't think it is wise to speak about universities in general. But I don't see any barrier if good administration is there, no financial barriers if keenness, earnest desire and will are there. This is generally the problem with every work, to have people behind it with enough zeal and experience and capability."*

Another interviewee reinforced this point that some universities may be able to reap the benefits of the new technology faster than the others. He said of their development of e-learning:

> *"That may be in some universities, but not all of them. Of course that depends on the type of programme, be it local or from one university to another, but for programmes from outside the country, I don't think the situation can be handled for the time being."*

A female interviewee confirmed this point:

> *"I think King Saud University and the King Fahad University of Petroleum and Mineralogy may foster this technology especially with female students. But for us in the Girls' Colleges, with current capabilities and methods of education, I do not think we can provide any help."*

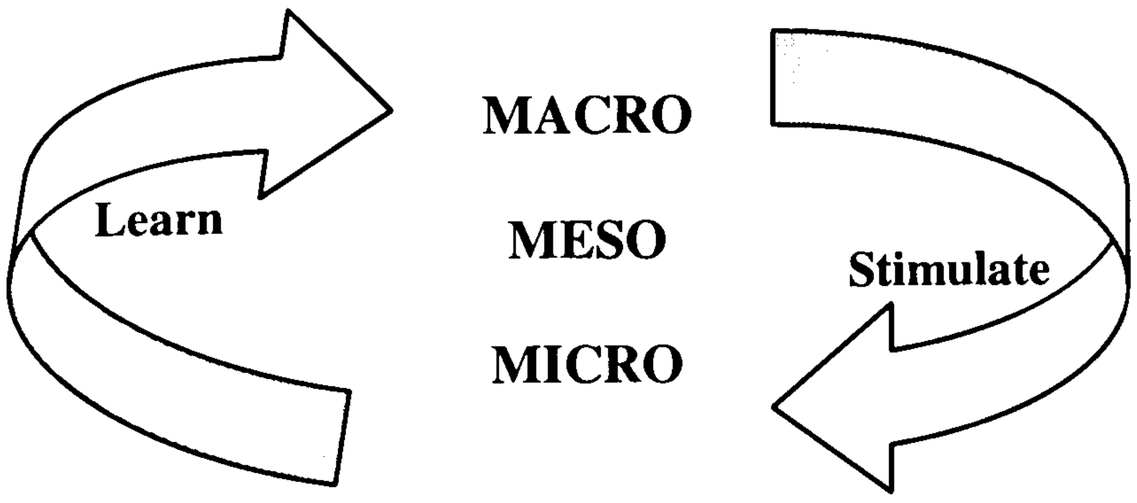
Interviewees who are optimistic about the future of higher education in Saudi Arabia are often those who have had experience of this technology or who have studied abroad. A medical doctor for instance said:

> *"I think this will happen in 2005 because most of our teaching takes place through the Internet. A conference took place in King Faisal Specialist Hospital, which used the new technology. As regards learning and research, we linked up with lectures in London or the USA. Their presentations came via satellite during the conference. Discussion of these presentations happened in the same way. I think this approach is an improvement. On the other hand, we cannot benefit from this fully or in the right way yet. I hope in the future we will be able to."*

The management of change in Saudi Arabian universities is, however, difficult. Academic perceptions of the future are clearly related to the circumstances of their work – the pressures of student demand and the limitations of Saudi training markets. Saudi academics are busy with routine work. There is limited competition between universities to create an environment in which academics will actively seek to change their work. This places limits on the extent and speed of change in all areas of Saudi academic life. In addition, the use of these technologies is difficult and slow in Saudi Arabia at the present, because of low levels of computer literacy. Policy makers are in some way reluctant or resistant to promote this kind of teaching. They are used to traditional approaches. But this is changing and there are high hopes for further change. The future development of e-learning in Saudi Arabia requires change at three levels: at the level of policy (the macro level), at the level of organizational support (meso level) and at the level of the individual (micro level). Individuals will be motivated to learn about and use the new technologies if their of experience of them has been good.

This interpretation is, perhaps, at this stage, a little optimistic. Developments in e-learning at the moment are probably at the level of individual initiatives such as those in King Saud University with its committee for distance learning. It is not clear to some of the people interested in such experiments whether they can be successful or not. Ideally, Saudi Arabia needs a framework for promoting e-learning at different levels and in such a way that institutions can learn from experience, develop and change and influence the wider debate about e-learning in the country. The argument can be represented as follows in figure 7.1:

Figure 7.1: Policy and Practice in E-learning Development



Feedback from the group who discussed the findings of this research were agreed: better leadership was required. One said:

> *"Saudi universities do not possess the ability in their current situation. They don't have the knowledge capability, professional or technological ability. They still need time, hard work and gradual progress."*

Another academic pointed out:

> *"I think Saudi universities will be capable of providing e-learning if they find chancellors to lead them and employ their groups of deans and staff members and make them evaluate the e-learning, since this area needs a dedicated specialized work team in science, technology and psychology."*

With regard to the readiness of Saudi academic staff and students to participate in such development processes for e-learning, one of the interviewees noted:

> *"It is possible but this depends on the need of society for this kind of learning and training. I think academic staff will be able to provide courses via the Internet but the problem is, are the students and trainees ready to receive online courses? I do not think so."*

It is very clear that in the training markets, using e-training is possible but this depends on the need of society for this kind of learning and training. This means that there is a relationship between supply and demand for Internet-based training. But the question is, does the supply of e-training generate its own demand? Or does the demand for e-training generate the supply? In the Saudi context, it is likely that the demand for e-learning and training is very dependent on supply. This means that if e-learning is to grow then universities and colleges must do more to shape and develop the market for it. It has to be a positive act of promoting new forms of learning, to help people become aware of the possibilities of learning in this way. It is unlikely that academic staff will feel that it is their responsibility to develop these new products in the university. They are much more likely to take on work outside their main job to supplement their incomes. This is a real challenge for university managers: how to encourage staff to develop new courses and market them more effectively.

In feedback from the three colleagues who discussed the preliminary findings of this research, all agreed that the relationship between the demand for and supply of training in Saudi Arabia was complex. The balance between the two was related to

the kind of incentives available to people. If the incentives were poor, people would not engage in further training. But it was not just a question of incentives. Leadership issues were involved. Leaders in organizations (private and public) had a responsibility to promote training and it would not happen if leaders did not understand its benefits (Meso level). For example one of them said:

> *"If there are incentives, there will be real acceptance and presence. The education sector is one of the public sectors that has proven its understanding of this issue, from individual teachers, school principals and supervisors. The Ministry of Education and the IPA and all the training courses also point to the interest of these organizations. They believe in training and have programmes tailored according to the needs of their employees and can give incentives. Lack of training or poor training and its being ineffective, is due to the fact that the organizations responsible for it do not believe in training or are not aware that training is a necessity. So when you make change in leadership positions in different public sectors, training could be easier and more effective. The area of education is a good example."*

Another academic thought that:

> *"If real training is available, it will affect supply and demand, as long as training is convincing whether to the private sector in the first place or the government sector. If training is accompanied by incentives such as supervisors' and directors' courses, there will be greater presence and acceptance."*

There are macro pressures at work that will force the integration of the new technology into the educational system because as discussed in (Chapter Four) there are not enough places in Saudi universities to meet student demand.

The situation is, however, changing. Both government departments and some companies are beginning to promote work-based training. One academic said:

> *"The Ministry of Education adopts this concept strongly: we see this in the educational development administration and in the education administration and in the new private companies that began competing in providing the technology as a means of education. Such companies include: Dawalig and Alalmiyah and others."*

These new companies draw attention to a new and growing phenomenon in Saudi society: the growth of IT training companies in the private sector. Such companies meet a real need and their work is likely to generate a demand throughout the society

for further work-based training opportunities. Public sector organizations will have to adapt and change to meet the challenge of the private market.

In the private sector, people take decisions quickly and try to do what the business requires. In the public sector there is always a long wait; people are reluctant to take initiatives for fear of their jobs. If Saudi society is to develop a culture of innovation, then these attitudes must change. People who work in schools and colleges will have to take more initiatives themselves. At the moment, this is difficult, given the prevailing political culture of the society.

7.3.2 The changing role of the university

The findings from the questionnaires and interviews indicated that the respondents generally agreed that the role of universities and colleges would be dramatically changed because of the Internet in the future. The role of Saudi faculty members will be dramatically changed but they expect these changes will not alter some aspects of the traditional role of universities.

Table 7.3 shows the responses of academics when they were asked about their expectations about using the Internet in higher education. Seventy nine percent (79%) of respondents agreed or strongly agreed that they believed the role of universities and colleges will change significantly.

Approximately two thirds (66.4%) of faculty members believed the Internet can help accommodate different learning and training styles. 65.3% of faculty members thought that they were better academics as a result of using new technology.

Table 7.3: Faculty Members' Expectations of the Role of Universities and Colleges and Academic Staff (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
I believe that the role of universities and colleges will be dramatically changed because of the Internet in the future.	1	.4	12	5.2	36	15.5	133	57.1	51	21.9
I believe that the role of the academic staff will be dramatically changed because of the Internet in the future.	1	.4	19	8.2	49	21.1	126	54.3	37	15.9
I believe that I am a better academic using new technology.	4	1.8	24	10.7	50	22.2	111	49.3	36	16.0
The trainees will change from passive learners to active learners by using Internet-based training.	-	-	1	.4	85	36.8	124	53.7	21	9.1
The Internet can help accommodate different learning and training styles.	-	-	9	4.0	67	29.6	126	55.8	24	10.6

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Table 7.4 shows that more than seventy nine percent of the interviewees believed that the role of Saudi universities would be dramatically changed in the future because of the Internet. Only 20.9% did not believe that.

Table 7.4: The Role of Universities and Academic staff (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
The role of universities and the academic staff will be dramatically changed because of the Internet in the future.	19	79.1	1	4.2	4	16.6	-	-

Feedback from a decision maker who tried to make a link between incentives and change among academics, said:

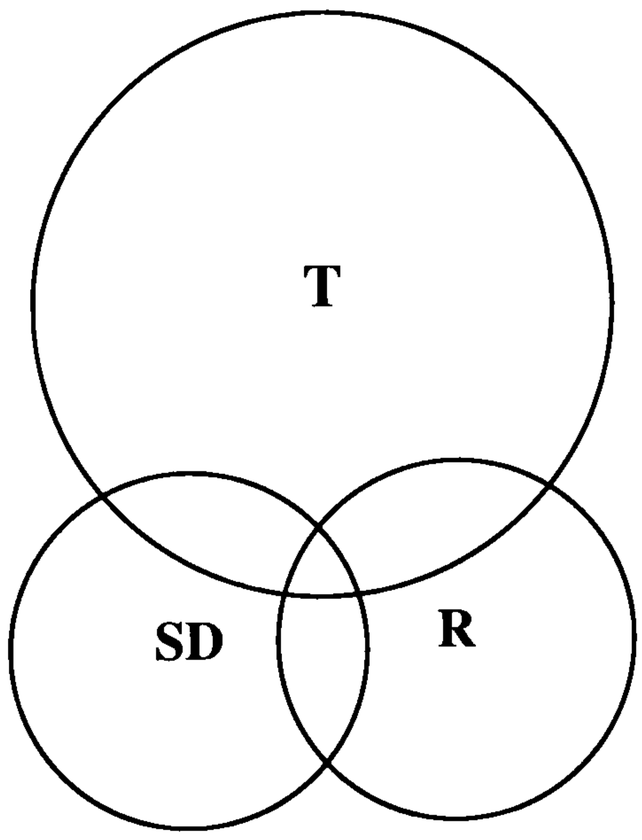
> *"The academic staff member must have personal and material motives in order to begin really to be abreast with change. What is happening in our society now is the beginning of change regarding incentives. In the civil service there is what is known as computer allowances and it is applied in some universities but not on some specialties. There must be incentives for the academic staff, personal and material incentives. I think training has a major role in such issues, because not all members of academic staff are able to use the computer."*

However, it is important to note that in Saudi Arabia, in the main, academic staff believe that teaching is the prime function in the universities. Research is usually a highly individual activity done for personal reasons and social development has a minor role. Most of the interviewees would agree with the comment of one who stated:

> *"The role of Saudi universities includes firstly teaching, then research and social development"*

Their perception of their role can be represented as follows figure 7.2:

Figure 7.2: Academic Functions



In Saudi universities, there are areas of overlap between these functions, but they are small. In general teaching and research are separate activities and neither relates strongly to social development. If IT is brought into this model, it brings the possibility of profound change in each of these activities and of building entirely new relationships between them. New kinds of teaching are possible and so, too, are new

kinds of research. Whether such change takes place, however, depends upon a number of factors changing. These include: resources and time for development, but above all imagination i.e. the sense of possibility in the minds of academics themselves about how their jobs could be done differently. In Saudi higher institutions, the imagination of academics is limited by the kinds of leadership they are offered and by the priorities that are set for them. This leads to the hypothesis that if IT is to be used to its full potential in the kingdom, great changes will be needed in the prevailing model of what both a university and a higher education is thought to mean.

If this is the case, then there is a real job to be done in helping Saudi academics appreciate the power and possibility of e-learning. If e-learning is to develop in the country it is important to do more than simply train experts in this field. All academics will need help to see and appreciate what the Internet might be able to offer them. This is a key task for continuous professional development (CPD) for academics that all academic institutions should take seriously and manage well.

Feedback from one of the decision makers interviewed pointed out that in Saudi Arabia some parts of the university system are changing, however, to reflect commercial values and to develop new kinds of programmes. He explained:

> *"There are commercial universities. We have local colleges and local universities such as the Hotel Services College in Abha and the University of Prince Sultan has been announced and there are others on the way such as Aaft's College, which will become a university soon. Again, there is change everywhere and we support any change that brings good to the country. In the linguistics College, we have a lot of changes; we have introduced a new machine called Scanner correction. When we hold examinations for admission and standard examinations, this machine can correct about 3000 examination papers in one hour. We have, as regards your study, e-learning, two photo – black boards connected to the computer whereby you can show what you are writing in the men's class in the women's centre. Even handwriting can be transformed into a written text via these blackboards and the interaction is very good. The only problem we face is the casual failure of the Internet. We need the infrastructure badly, in the area of the Internet and the communications networks. These two issues affect our work directly."*

However, the modern world of research and teaching in universities at the global level is developing new models of both. There may be a danger in Saudi Arabia and, perhaps, throughout the Arab world, that academic cultures remain too conservative

and, therefore, always dependent on the much more productive R&D of the developed societies in the global economy.

One female academic highlighted a worrying aspect of this: complacency among academics:

> *"The role of Saudi universities and higher institutions focuses on teaching mainly. Certificates are given to students who do not deserve them and who are not qualified. Students have to reach the level of the academic staff's mode but in the Girls' College the situation is vice versa."*

This raises, also, questions about the level of resources applied to the education of women in the Kingdom. She brings up questions about the quality of education and she has concerns about both. It is widely recognized that Girls' colleges are, in comparison to universities, under-resourced and that they have a large number of students. These are not the conditions for innovative academic development. There is not the capacity for development in such colleges. Consequently, it is unlikely that they will be able to respond to and benefit from new kinds of IT-based curricula.

Staff in universities are not encouraged to undertake research or to engage in the process of solving social problems. This point, widely shared, is that academics undertake research only for their own benefit. They are not happy with this. They believe that they could do more for the society but that this will not happen without appropriate support and encouragement from academic managers. This comment invites further questions about the prevailing model of the university that governs working practices in higher education in Saudi Arabia.

As a result of the increase in the number of Saudi students, the capacity of Saudi universities to change their teaching methods is limited. Given that there is a high demand for places in universities – and this is particularly true for women – this limits the ability of universities to change. Too much time and energy is spent on keeping the system going in its present form rather planning new developments.

Co-operation among academics in different institutions would help overcome some of these problems. It would help build the "Communities of Practice" the new technologies demand. But this is also difficult. One academic explained:

> *"The role of Saudi universities includes firstly teaching, then research and social development. Social development refers to staff development in various ministries and public services such as education or agriculture or medicine. Each university has its own special profile of social development e.g. IMSIU concentrates on Islamic and Arabic sciences while KSU concentrates more on science and engineering. KF (Dahran) focuses on petrochemicals."*

This means that e-course development in Saudi Arabia in the future must build on the expertise of different institutions and responsibility for this must come from within each institution. The managers of each institution, therefore, have to develop the local infrastructure to be able to develop e-courses. On the other hand, there are differences between universities and institutions in terms of the financial support for new technology and communications.

Others claimed that using the Internet in teaching and training processes will benefit art subjects more than science subjects.

At one level this seems a reasonable viewpoint but it is actually slightly misguided. If typical, this indicates that academic staff in Saudi Arabia need a better understanding of the power and potentiality of e-learning. It is not that they need to know more about computers; rather they need more imagination to enable them to think about what might happen in the future. These are conceptual rather than technical issues.

Some previous studies emphasised that the role of universities and colleges and the faculty members do change as information technology is introduced into the teaching and learning process. Zakaria (2001:54) and Baxter & Miller (1998) suggest this leads to changes in their traditional roles. According to Cookson, digital technologies are bringing changes to the university, providing more numerous, more varied, and more accessible learning opportunities to men and women in all walks of life beyond space and time." (2000:71).

Suh (2000), Cook (2000) and Blass (2001:107) argue that the academic structure and curricula of universities and colleges will change. They added that without changes in ideas about instruction, it is hard to use the new technology in the higher education institutions.

7.3.3 Curriculum change

The analysis of questionnaire and interview data demonstrated that the great majority of respondents agreed that it was necessary to change the curriculum to improve and incorporate new technology. Work with other colleagues across disciplines was seen as an important element of this change.

It can be seen from Table 7.5 that more than eighty percent (80.2%) of faculty members agreed or strongly agreed that they need more opportunities to work with colleagues to become more proficient using the Internet-enhanced curriculum units.

Table 7.5: Faculty Members' Perception of Curricula Change (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
I need more opportunities to work with colleagues to become more proficient using the Internet-enhanced curriculum units.	-	-	10	4.3	36	15.5	136	58.6	50	21.6

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

The need for such change was clearly acknowledged as Table 7.6 shows.

Table 7.6: Interviewees Perception of Curricula Change

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
It is necessary to change the curriculum to improve and incorporate new technology.	22	91.7	-	-	2	8.3	-	-
I think academic staff need software training to be able to deal with new curriculum units.	24	100	-	-	-	-	-	-
There are difficulties related to curricula that are easy to overcome by using technology.	21	87.5	1	4.2	1	4.2	1	4.2

More than ninety one percent of interviewees showed that it is necessary to change the curriculum to improve and incorporate new technology. Some comments and suggestions have been made as follows:

> *"Even without the new technology we have to make changes in our curricula because what we both learned and taught 20 years ago is still being used and is now out of date."*

One male academic, stating, provided a similar response:

> *"It is necessary to update curricula because the approach of teaching and expectations about the effectiveness of traditional lectures will be different from expectations of the effectiveness of distance learning. It will require great effort to develop curricula. It is not suitable to use the same curricula and the same way of teaching, especially given the scope of the subject and the need to make it easy to understand."*

Another academic said:

> *"Yes, the curricula have to change. They should use different methods, like discussion groups."*

Some interviewees suggested that the specialists have to make modifications to curricula but not radical change. As an interviewee explained:

> *"It depends on certain things. Some curricula you need to change in order to keep pace with the new technology, because the content requires a certain methods of learning. You must consider this thing and make changes in curriculum to go abreast with the modern method. Because of adaptation is a kind of change, but not radical change. I perceive there would be a difference from one curriculum to another, from one college to another, but I don't see the need for radical change."*

In fact, curriculum change is a complex process. It covers questions and discussions about the content of courses. What should be included in a course? What should be excluded? It covers how courses are taught e.g. in classrooms or by e-learning. Should the learning process be teacher-led or student-led? Finally, it covers the process of evaluation. How should learning be assessed? E-learning has major implications for all three i.e. for course content, pedagogical process and evaluation. Academics are too often only specialized in the content of their subjects. They may not be good teachers or able to develop innovative ways of assessing students. Those academics that will develop e-learning will be competent in all three domains.

However, all interviewees believed that academic staff need software training to be able to deal with new curriculum units.

Academic staff are needed who have:

- Subject expertise;
- Time;
- Motivation;
- Resources.

But these in themselves are not enough. In addition people need:

- To develop their IT skills and understand the possibilities of the technology;
- Educational imagination and a knowledge of how students learn and how they can be stimulated to learn in new ways;
- Some grasp of the principles of curriculum design and the design of course material.

Given this, training programmes for academics have to be well designed.

However, e-learning opens the possibility that some students will acquire more information and a greater understanding of some issues than is possessed by their teachers. Put another way, the possibility opens up that teachers will be able to learn from students. This indeed is the power of the new technology. As school students and undergraduates become more competent in the use of IT, many will have greater skills in this area than their teachers. This is not a problem, though some staff will feel threatened by it. This problem must be dealt with in training programmes. The aim of such programmes must include, in addition to the development of technical skills, help for academics to understand the broader changes that IT will make to their work and their relationships with students. The general point stands: e-learning has the potential to alter all relationships within higher education. It transforms the nature of expertise. It challenges the very idea of the expert.

In Saudi Arabia, the decision makers do not realize the importance of e-learning and curriculum development. This field of e-learning is limited by the policies of the

Ministry of Higher Education. It follows that e-learning will not develop in Saudi universities unless state policies – especially those governing the recognition of courses and curricula – change.

The findings of this study regarding curricula change and training to become more proficient using the Internet-enhanced curriculum units, are consistent with many other studies: (Cook 2000, Berge 1998, Hall 1997 and Zakaria 2001). However, according to Abahussain (1998: 96) most Saudi academic staff thought that it is not necessary to adapt the curriculum to meet the needs of the technology. The challenge is to change this.

7.3.4 Cooperation between Saudi universities

E-learning technologies open up entirely new prospects for academics in different universities – indeed in different continents – to work together. Learning can be distributed across the globe promoting new kinds of flexible learning (Edwards, Nicoll and lee, 2002). Once again, however, whether this can happen depends upon how academics see themselves and their roles.

From Table 7.7 it can be seen that the great majority of faculty members (92.3%) thought that cooperation between faculty members in higher education institutions would improve the training process and possibilities for employees. And the majority of respondents (88%) also considered that universities and colleges could cooperate with other organisations in terms of providing distance Internet-based training courses for their employees at work. Furthermore, 88% of academic staff believed that co-operation among higher education institutions can produce good quality Internet training courses.

One female academic interviewed stressed that teams of experts have to design Internet-based courses to achieve quality courses. As she said:

> *"The quality of the distance training programmes conducted through team work is better, but we sometimes work as a team to complement each other. So the teamwork is better regarding quality."*

The Internet has a huge potential to make effective links between universities and colleges. The majority of academic staff (85%) agreed or strongly agreed on this point.

Table 7.7: Perception of Co-operation between Higher Institutions and Faculty Members (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
It is easy for academic staffs to co-operate with other Saudi higher education institutions.	6	2.6	44	19.0	61	26.3	99	42.7	22	9.5
The Internet has a huge potential to make effective links between universities and colleges.	-	-	7	3.0	28	12.0	147	62.8	52	22.2
Co-operation between higher education institutions can produce good quality internet training courses.	-	-	1	.4	27	11.6	147	63.4	57	24.6
Universities and colleges can cooperate with other organisations in terms of providing distance Internet-based training courses for their employees at work.	-	-	1	.4	27	11.5	151	64.5	55	23.5
Cooperation between faculty members in higher education institutions will improve the training process for employees.	-	-	-	-	18	7.7	157	67.4	58	24.9

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

With regard to the data from interviews, 91.7% thought that there is co-operation between Saudi universities and colleges, while two academic staff thought otherwise (see Table 7.8).

Table 7.8: Attitudes Toward Co-operation between University and Faculty Members (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
There is co-operation between Saudi universities and colleges.	22	91.7	-	-	2	8.3	-	-
I believe that co-operation between university faculty members will produce good quality Internet training courses.	24	100	-	-	-	-	-	-

On the whole, there appears to be a large degree of consistency in the respondents' answers in both questionnaires and interviews. The data showed that a high majority of the faculty members thought that there is co-operation between Saudi universities and colleges. But they considered that the extent of this cooperation was less than is needed.

Taken together, these results revealed positive attitudes for academic staff about cooperation between Saudi universities in terms of teaching via the Internet. There are many examples of this emerging phenomenon. Respondents explained:

> *"We aspire towards having much better cooperation than we are having at the moment. In my view, full cooperation could be achieved through many different ways such as what is called the specialized associations whose members basically belong to a number of universities and colleges of higher education in the country. For example, the Saudi Association of Educational and Philosophical Sciences is located in King Saud University whereas its members belong to all colleges of teaching."*

In contrast, some other interviewees considered that there is insufficient cooperation among colleagues in Saudi universities. They stated:

> *"I think cooperation between the academic staff in the universities and colleges is missing or absent to some extent. Sometimes we lack cooperation in opinion inside one college or even between departments of the college. As for universities, in general, I see there is cooperation, when it regards holding conferences or symposia or the work of scientific societies. But the sort of cooperation that exists in a continuous form, I don't think we have that with the degree we all hope for."*

An engineering doctor in the Chemical Engineering Departments in King Saudi University clarified:

> *"Unfortunately, co-operation among colleges is poor or non-existent, especially among colleagues in chemical engineering departments in other Saudi universities. They meet abroad. If I talk about my department, nobody visits us from other departments. We don't visit similar departments in other universities in Saudi Arabia. We don't know what is happening there and they don't know what is happening in our department. It is only through conferences abroad that we find out what is happening in other departments in Saudi Arabia, for example in King Abdulaziz University."*

A female academic made a general point about the whole culture of collaboration in the kingdom.

> *"Cooperation between government organizations and establishments is missing, generally. The establishments that are supposed to cooperate do not show any cooperation except within personal relations."*

It is certainly not a surprising view because there is in fact little cooperation among staff in Saudi universities, even among staff within the same institution. Contact exists, of course, among people through their professional associations or subject areas, but this does not translate into cooperation among universities. Part of the reason for this is explained in (Chapter Four) that academics often have other forms of employment to supplement their university salaries. Those who can earn more are, therefore, very busy. These same pressures limit the amount of time academics are prepared to spend on research. There is no real incentive or reward for them to engage in curriculum development. In other words, public sector employees are not well rewarded in comparison to those in the private sector.

The results of the study agreed with studies elsewhere such as, Zakaria (2001:55) who disclosed that in Malaysia authorities do not set up clear channels to help universities to co-operate. Even in the developed western societies there are problems in this field. Jongmans (1996) noted that there is a lack of cooperation between the diverse organizations and universities that are involved in continuing professional development of employees and teachers in the Netherlands.

However, all the interviewees agreed that co-operation between university faculty members will produce good quality Internet training courses in the future though much needs to be done to make it happen.

Internet-based learning will require new kinds of working relationships among colleagues. Teachers will work with systems people and publisher's designers. New kinds of professional relationships will develop. Curriculum development will become the work of teams and not just of individuals.

The quality of e-learning, therefore, depends on the experts who manufacture the technology. The whole process can, in principle, lead to face-to-face relationships between teacher and students being improved.

A related question concerns quality control of curricula. Quality control is an important feature of all higher education and also for work-based training for professional employees. International discussions of these issues in relation to e-learning are polarized. Some writers believe e-learning courses can be designed to be of the same academic quality of traditional courses (e.g. Hall (1997) and Forsyth (2002)). Other writers have claimed this is not the case (e.g. Blackburn and Athayde (2000), Gilmore (1998) and Niemczyk (1998)).

In conventional higher education, the quality of courses is assured through academic validation. Those who teach courses are closely involved in judging their standards and quality. Different countries organized this process in different ways. In Saudi Arabia, for example, the Ministry of Higher Education finally validates courses with the help of academics. With courses of professional training, professional associations are involved in determining both course content and standards. Distance learning represents a challenge to these traditional models of quality control. Special care is needed to ensure the development of high quality course materials and to make sure there are strong regulations governing such courses. In addition, given the "supercomplexity" of modern knowledge, curriculum materials are needed that help, indeed require, the student to develop a critical understanding of their study materials (Barnett, 2000).

Feedback from a decision maker who works at Institute of Public Administration interviewed noted that:

> *"Whenever the infrastructure is there I expect that learning via the Internet is not difficult. But we need good regulations to control this kind of learning."*

This study has suggested the university of the future will have many features that are different to today's universities.

The general point to conclude from this account of co-operation among academics and institutions is that the university of the future will not function within existing boundaries of knowledge, subject and departmental differences or in isolation from emerging training markets in industry, commerce and civil society. At the moment, however, academics and their managers are not as aware of this as they should be.

7.3.5 Perceptions of the benefits of e-learning to different constituencies of learners

The university of the future will be in a position to meet the needs of learners who are currently denied access to them. Whether steps are taken to achieve this depends, however, on how academics perceive these possibilities.

The analysis of the data collected in this study demonstrated that it was widely agreed that there are a lot of groups that will benefit from Internet-based training. However, the great majority of the interviewees (91.7%) thought that there are many groups in Saudi society unlikely to benefit from it. A summary of these responses is presented in Table 7.9.

Table 7.9: Benefit of E-learning to Different Groups (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
There are many groups in Saudi society to benefit from Internet-based training.	**21**	**87.5**	**-**	**-**	**-**	**-**	**3**	**12.7**
There are groups in Saudi society unlikely to benefit from IT.	**22**	**91.7**	**-**	**-**	**1**	**4.2**	**1**	**4.2**

More than eighty-seven percent of the interviewees stated that there are a lot of groups who will benefit from Internet-based training. Some of their reasons for saying so are as follows:

One academic highlighted the need to make some careful distinctions in describing the profile of potential students:

> *"It depends upon their specialization. Some groups will benefit but if we use it at different levels in the educational system, all will benefit. But now, there is a gap between the traditional people and the Internet. New academic staff are more likely to benefit than older people in the same specialization."*

Another was quite specific:

> *"Educated groups might benefits from the new technology because it needs people who at least have basic skills to deal with it."*

A female faculty member in the Institute of Public Administration stressed the importance of this new technology for women, especially those in remote places. She said that:

> *"I think it will provide opportunities to some people, for example in the eastern, western regions and other areas. As for females, there are no other branches except in Riyadh, so they will have a strong motivation for learning. There is also a certain category who may have the chance to get the training, because they are deprived since they are in remote places."*

Another highlighted the benefits to illiterate people:

> *"I expect that it is in their power to make use and benefit, but it may take longer. As regards illiterate men and women and semi-literate workers, if provided with the chance to learn and train in their place of work and given the incentive, they will benefit from the technology. But this process requires a strong national policy to adopt this new trend and that will take years to attain."*

Another female doctor was not so optimistic. She argued that:

> *"First of all, let the educate people know how can they deal the new technology then it might be in the future that all groups are going to benefit."*

The technology will encourage people to turn to and learn about everything, even about Islam. It is as a way to improve Saudi society. Islam promises justice and development and values learning for everyone. This kind of learning and training is seen as being very appropriate for everyone but perhaps especially for Saudi women.

Women in Saudi Arabia stay at home. IT provides a means to enable them to continue to learn and to develop. Without such opportunities, they might become unhappy and frustrated. They are very aware of the lifestyles of women in other parts

of the Arab world and abroad in Europe and the USA. E-learning, it could be argued, helps women maintain their religious identities and their educational development.

The majority of interviewees (91.7%) felt that there are many groups in Saudi society unlikely to benefit from IT. Interviewees related this view to foreign workers, illiterates older people and people at work, just to name a few.

One interviewee highlighted religious issues that might deny people access to the Internet:

> *"Some Muslim people believe that some new technology such as the Internet or T.V. are forbidden. Because they deal with photographs."*

It is obviously not just a matter of educational level or religion. One female academic said that, despite some people being highly qualified in their subject, they could not deal with the new technology:

> *"It is known that in the present time whoever is computer illiterate is a real illiterate. But some people, PhD holders among them of course, do not know how to use the computer and they do not welcome the idea of working with the computer. However, among female academic staff I have seen more than 50% of them keen and eager to use the new technology"*

Factors that are thought to promote or hinder access to the benefits of e-learning – illiteracy, gender, religion – have all to be seen in the light of geography. One colleague highlighted this:

> *"The difficulties lie, to my understanding, in geography. The city provides the basic infrastructure. But in distant villages, where no means of communications or telephone lines are available, I think it would be very difficult. Also, the person who lacks the personal skills, the illiterate person, would be hindered due to his illiteracy, from making use of the Internet."*

Another one claimed that:

> *"There would be some people who will not benefit from new technology particularly who do not need it such as farmers."*

There is a problem of urban-rural differences in Saudi Arabia. The cultural differences between the city and the village are clear: people in cities have access to people and ideas from overseas and from their work in the modern sectors of the economy and from travel. People in villages, however, are not as isolated as many in

the rural Middle East. Public services and communication technologies are available to everyone in the villages.

There is a challenge here: how can Saudi Arabia use IT to improve the basic skills of people like farmers and others in the traditional sectors of the economy? In principle, e-learning and e-commerce will enable such groups to becomes more efficient and to contribute more to local economic development.

The Dean of Computer Science College in Imam University stated:

> *"To be honest, not everybody is supposed to use the Internet if he is not in need of it. If I am not a teacher, a researcher or a businessman, why should I use the Internet? It means we should not force all society members to use the Internet; only those who make use of the Internet such as students, teachers and economic researchers should use the Internet. The majority of society may use the Internet to access the news only."*

If, however, the new technology is restricted to teachers, researchers or businessmen, the students, learners (employees) and other people are going to lose a lot of IT advantages. Those who seek to control students' learning may wish to restrict access to the Internet (or, indeed, to libraries) on the grounds that students and employees who have an open access to materials may discover things beyond the understanding of their teachers and managers. This, in fact, is the promise of the Internet. It makes possible new kinds of learning and discovery, altering profoundly the relationship between teacher and student, between student and curriculum planner (whether this a professional body or the state) and among people in general.

Some academics said that there are certain groups in Saudi society that will not benefit from the new technology. There is a danger in this kind of thinking: that of the self-fulfilling prophecy. If the groups of people described here are made to feel that they cannot learn, then it is likely that they will not do so. This is a danger to avoid. The challenge is to be hopeful and imaginative and to think of ways to introduce e-learning, and all that IT offers, to wider groups of potential students.

Whether this happens will depend upon another feature of the structure of higher education, the arrangements that are made for both academics and their potential students in employment, to train to use the new technology.

7.3.6 Training opportunities for employees

The responses gathered from the interviews in this research demonstrated that it was extensively agreed that training opportunities of employees in both Internet-based training courses and traditional courses would be similar in the future. Table 7.10 summarizes their responses:

Table 7.10: Academic Staff's Attitudes Towards Opportunities of Training (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
Training opportunities of employees in distance Internet-based courses be the same as non-Internet-based courses in the future.	**23**	**95.8**	**-**	**-**	**1**	**4.2**	**-**	**-**

Nearly all the interviewees (95.8%) agreed. The logic of their view emerged in the interviews.

> *"The chances of training for employees through the Internet will resolve the problem of congestion in training. The only organization that takes the responsibility for training government employees is the Institute of Public Administration. Universities will contribute through some programmes designed by the development service centre, and that will reduce the pressure on the Institute of Public Administration."*

There is a gender dimension to consider. In Saudi society men have a better chance to make use of IT than women. Men get most of the chances related to employment development training. However, in general, Saudi employees are not anxious to do training. Therefore, the government should oblige employees to attend training courses through incentives, encouragement or through contracts between the employees and the state.

One female faculty member stated:

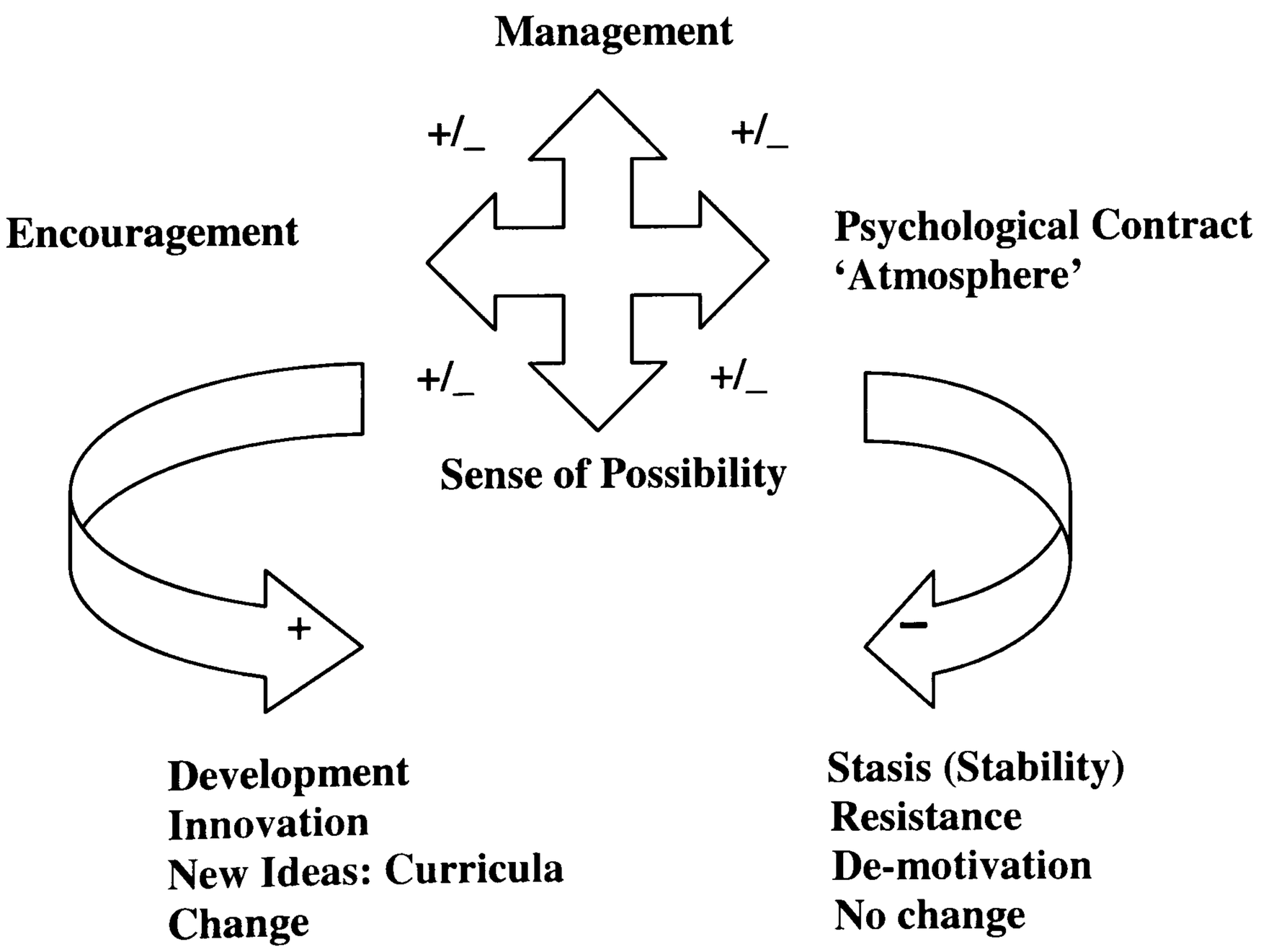
> *"We should oblige employees to attend training courses; we must give them incentives and encouragement. In the contracts between the employees and*

the state, there should be clauses that compel him to upgrade himself through training, which will force him to train regularly."

But there is another factor: the contract between the employee and the state. This too needs to change. In management literature there is a concept relevant to this discussion: that of the psychological contract between an employee and the employing organization. Whereas employment contracts cover such issues as pay and conditions, psychological contracts – unwritten, often unspoken – are about attitudes and expectations. They cover such issues as training, attendance, and quality of work, work motivation and attitudes. These are very often subtle, unspoken and tacit. But they are very important in deciding such things as how hard people are prepared to work, whether they are prepared to be innovative or helpful or to invest more of their own time in their own career development. Figure 7.3 illustrates how the interactions among these factors can be conceptualized.

This model tries to relate two different possibilities for the development of e-learning to the styles of management within particular academic institutions. The key proposition it helps to explore is this: the management climate of a higher education institution will be important in deciding whether that institution succeeds or fails in developing e-learning.

Figure 7.3: Dimensions of the Management of Change



It is easy to deduce that successful universities and companies that use information technology well are likely to be those with a positive (+) management climate.

They encourage innovation, value training and enable employees to develop a positive sense of possibility in their work. These factors can interact negatively, however, producing de-motivated workers who are unwilling to change and who may, indeed, resist change.

In this connection, Phillips, lead author of GetEducated.com's Best Distance Learning Graduate Schools, emphasised that the Internet will offer the chance for people – whether men or women – to benefit from e-learning and training (1999:online). This is in accordance with The General Bureau of Civil Servants (1980:1-7), which defines the most important objectives of training in Saudi Arabia as follows:

1. The preparation of employee (men and women) to be able to work in the public sector;
2. Improvement of the performance level of the employees;
3. Preparation of employees to follow new ways of working or use the new technology.

These objectives will apply in e-training in the future for all Saudi employees. However, a male academic thought:

> *"The problem remains in that the employee needs an incentive to drive him to join these courses. The question is: does the employee have the ability and will that enable him to train himself, without the hope of getting promoted? Has the employee in our country reached the conviction or the belief in continuous learning to develop a certain experience? I think there is a big question mark around this."*

But the private sector is changing fast and will challenge many aspects of employment arrangements in the public sector forcing change throughout that sector. There is a need and a probability, therefore, for work-based training opportunities to develop. The development of such opportunities will help change attitudes to learning.

Changes have to take place within universities for those institutions to play a different role in relation to employee development. Experience in the developed countries highlighted that new structures such as technology transfer departments, science parks, flexible learning centres, may be necessary for these aims to be realized (King, 2002). Without a commitment on the part of academics to develop their work in this direction, such developments will not happen.

To some degree, that commitment is dependent on their beliefs about the need for training and their understanding of how new technologies of learning can help. Both issues emerge in relation to the theme of increasing the productivity of employees.

7.3.7 The productivity of academic staff and trainees

According to the data presented in Table 7.11 most of the academic staff were found to have positive attitudes towards learning and training in terms of improving and increasing the productivity of employees. As the table shows, academics believe e-learning will improve skills, creativity and education and in doing so improve the skills and understanding of academics themselves.

Table 7.11: Perceptions of Affect on Productivity of Staff and Trainees (Questionnaire)

Items	SD		D		U		A		SA	
	F*	%	F*	%	F*	%	F*	%	F*	%
Training through the Internet would help trainees improve their skills.	-	-	2	.9	26	11.3	140	60.9	62	27.0
Training through the Internet would stimulate creativity in trainees.	2	.9	6	2.6	57	24.8	105	45.7	60	26.1
Internet training courses would significantly improve the overall quality of my trainees' education.	-	-	4	1.7	46	20.0	139	60.4	41	17.8
The Internet can be a useful instructional aid in almost all subject areas.	1	.4	2	.9	31	13.4	137	59.3	60	26.0
Courses via the Internet can be used to save academic staff 's time.	2	.9	4	1.8	53	23.3	123	54.2	45	19.8
The Internet-based training courses would increase my success in teaching.	2	.9	2	.9	79	34.3	111	48.3	36	15.7
If I used the Internet, I would get a better picture of developments in my subject.	2	.9	2	.9	19	8.3	133	57.8	74	32.2

(*) Frequency
SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Table 7.12 set out the responses of interviewees about the problem of increasing the productivity at work of employees.

Table 7.12: Perceptions of Affect on Productivity of Staff and Trainees (Interviewees)

Interview Responses	Agree		Unsure		Disagree		Missing	
	N	%	N	%	N	%	N	%
The Internet-based training courses will help to increase the productivity of trainees.	22	91.7	2	8.3	-	-	-	-

Generally, the analysis of the questionnaires and interviews indicated that more than ninety percent of the respondents thought that Internet-based training courses would help to increase the productivity of trainees and help them get a better picture of developments in their subject.

The prevailing view is that when courses through the Internet are conducted with high professionalism, and when learners receive a good training and begin to apply the technology in their work, this will help employees to improve their skills, abilities and productivity in their specialisations.

This is in line with Sampson's result from his research that if online courses are poorly designed this probably will lead to learners being more confused about how to develop and improve. Their productivity might decrease (1999: 249-250).

Before the Internet started in Saudi Arabia, the government attempted to use new technology in order to increase the productivity of employees. According to Al-Sabaan, (1985:171) the five development plans in Saudi Arabia have all focused on the importance of improving the labour force.

It is clear that this economic goal has to be supported by training. What is not so clear is how Saudi universities can contribute. This research shows, however, that Saudi academics are interested in and committed to change to develop e-learning. Unless the structures within which they work become more supportive, it will not be easy for them to make the necessary changes to their curricula and working practices.

7.4 Conclusion

The aim of this chapter has been to show that e-learning changes many facets of the life of universities. It opens up new possibilities for the emergence of new communities of practice that cross academic, commercial and, indeed, global boundaries. Academics in Saudi Arabia feel positive about such developments. They need more support, however, to bring them about. At the moment, academics have to cope with accelerating changes in their work environment within the traditional (though changing) constraints of Saudi society and higher education policy.

CHAPTER EIGHT

CONCLUSIONS AND RECOMMENDATIONS

CHAPTER EIGHT: CONCLUSIONS AND RECOMMENDATIONS

Many countries – developed countries and developing countries – are developing systems of e-learning and the institutions e.g. open universities, to manage them. E-learning is a new world market. New communications are transforming our ways of thinking. At the same time, it changes the ways we work, learn and train. Some countries, for example Singapore, have made the development of IT literacy their central educational goal and part of all educational practice. The purpose is to enable all teachers in the country to use this technology effectively and to place Singapore at the centre of the knowledge revolution in communications (Collis and Jung, 2003: 177).

However, in Saudi Arabia these changes are just beginning. Therefore, this study aims primarily to help universities, higher educational institutions and the workforce in both public and private organizations to benefit from the new technology.

The purpose of this chapter is to draw together some conclusions from this research. Specifically, it is to set its empirical results against the background of the changes that are taking place in Saudi society and in higher educational policy in the kingdom. The aim is not to recapitulate the account given of these issues in earlier chapters. It is to highlight some of the analytical issues that need to come into view to understand better the attitudes of academics towards the new technology of learning and to guide future research in this field that will take the analysis further.

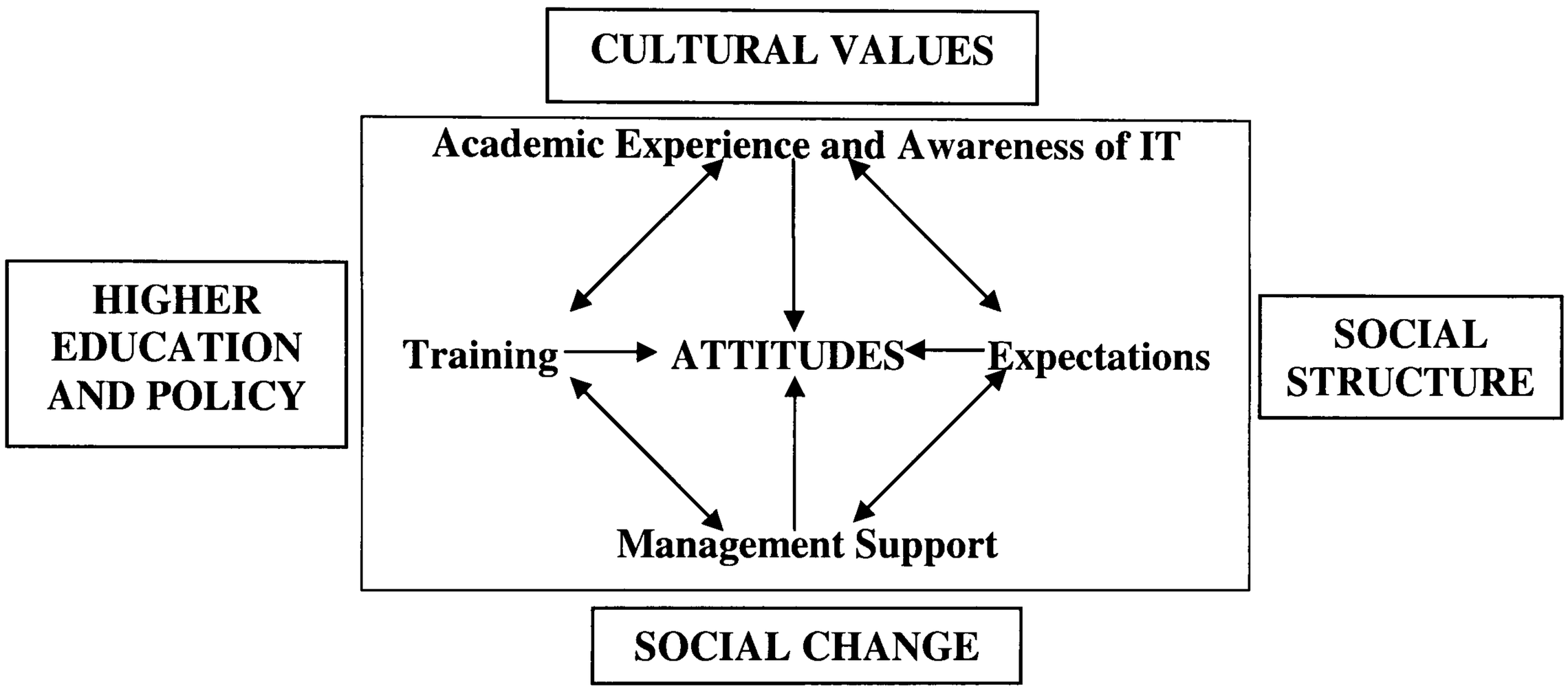
The results of the surveys that were part of this research will soon be overtaken by the changes in higher education that are occurring in Saudi Arabia. Academic attitudes will change. New academic structures will have emerged to enable universities to engage more with employers and to deliver courses in more flexible ways. In five years time a survey such as this one would produce very different results. On the other hand, the frameworks of analysis built up in order to interpret the results – and refined in the course of doing so – may still have relevance.

The early hypotheses of this study were derived from an international literature about attitudes, higher education and the Internet, from reading about and reflection on

Saudi higher education and from experience of working within it. These elements were a good platform from which to begin the work. It became clear, however, as the results were being interpreted, that many new issues came into view that had not been thought about very much at the beginning. The process of doing the analysis brought with it opportunities to develop the framework of the study in more depth.

In retrospect, but in the hope that other researchers in the future might think about these things, the framework that developed and which has informed this study can be pictured as follows:

Figure 8.1: Analytical Framework: Attitudes in Context



Academic attitudes are at the centre of this research because academics are so important to the future development of education and training. This is true for all societies. As the global, informational, knowledge-based economy grows, those who work at its centre will determine its future shape. Saudi Arabia is a rich country but in respect of e-learning it is a long way behind the developed industrial societies of the world. The research base of the country is not a strong one and there are very strong pressures at work to improve the levels of training among members of the Saudi labour force, at all levels. Academics are part of this. Their attitudes towards these changes need to be understood.

Saudi Arabia has a special position in the Islamic world and in the Middle East. Its traditions of education are those of an Islamic society and its government, as well as

its teachers, is in close contact with developments in education throughout the Middle East. The Arab Open University has branches in Saudi Arabia and there are many cultural and professional links between Saudi academics and their Arab colleagues. It is important, therefore, to bring many cultural factors and values into view in trying to understand academic attitudes to new technology. Despite its wealth, Saudi Arabia shares some of the same educational problems as other Arab countries. This study has set out what some of these are. They include: a young population and, therefore, a high demand for university places, yet shortages of academic staff. There are great pressures to innovate with new modes of teaching, yet there are strong cultural influences that value older forms of teaching and learning. Academics are part of an existing system of higher education. This determines the priorities of their current work and the constraints within which they do it. Their attitudes are inseparable from these. For example, Saudi universities do not have strong links with employers and commercial organizations. It is hard for academics to do this because, as has been shown in (Chapter Five), there is a real shortage of university teachers. One aspect of this is that ideas about how to promote learning and training for employees who left school or university are not very well developed.

Members of the group who discussed the research findings agreed with the proposition that e-learning will help solve the problem of the acute shortage of academic staff members, both men and women. One of the academics pointed out in feedback:

> *"With the increase in students numbers there will be a need to accommodate them in universities. But we will face a shortage in academic staff. Our main problem is the availability of the staff member in more than one place at the same time. E-learning and teaching is the tool to achieve that. But, before that, we must prepare the basic needs for this technology."*

The government recognises both these problems. To understand how they might be solved, we have to explore in more depth how academics see the changing world around them. We have to appreciate how different groups among them think about the future. We need to know how they view change in higher education. We need to learn about how they think Saudi universities can change and develop. All these factors interact to influence the attitudes of academics towards both the new learning

technologies and the future, as they see it, of the society in which they live. It has become clear in the course of this study that these issues have to be kept in mind in order to understand and explain the attitudes of academics. The main problem is to understand that the attitudes of individuals are bound up with patterns of change in the society as a whole. When we focus in more detail, it becomes clear that various aspects of their ***work situation*** give shape to their attitudes and opinions. The challenge is to see how these different levels interact.

8.1 Conclusion of the findings

Academic attitudes in general

The findings of this study reveal that academic staff attitudes in Saudi universities, colleges, and higher institutions are highly positive about using and integrating the Internet in teaching and learning. The study has shown how these positive attitudes can be explained. On the other hand, there are many obstacles and difficulties facing the development of IT and Internet-based training in Saudi society and higher education in the future. This study has identified the most important of these.

Approximately all the respondents have personal computers and Internet connections. They are clearly very enthusiastic about future possibilities for teaching and learning using IT and aware of the power of technology in teaching and learning. This is obviously related to their own experience. Therefore, a number of hypotheses can be deduced. For example, we would expect that people who have had experience of using PCs and the Internet will be more likely to have positive attitudes towards their use in learning, compared to those with little experience. Similarly, those who are required to use PCs in their workplace are more likely than those who do not to have positive attitudes.

The majority of respondents to the questionnaires and interviewees noted that they had inadequate formal information technology training. Most of them used to keep up to date themselves with their skills and knowledge in terms of new technology and the Internet. In addition, they thought that a lack of training for academics limits the integration of the Internet into learning and training processes. This means that

the lack of IT training led, in their view, to poor academic staff performance, lack of motivation and opposition to change. By contrast, academic staff who have already had Internet training courses felt more confident and motivated; and they accepted change.

However, university administration does not encourage faculty members to attend IT training courses in their opinion. This is considered to be a weakness in the higher educational system of Saudi Arabia. Most of the higher institutions in other countries have deemed such training to be a part of academic staff's rights.

Many academics thought that e-learning will threaten them. Therefore, if e-learning is to be accepted by academic staff, they must be encouraged to see it as something that will not threaten but will actually improve their job prospects. Therefore, they have to learn more about integrating the use of the Internet into their teaching.

The majority of respondents thought that they were enthusiastic about providing learning and training courses through the Internet. Most of them did not feel anxious about this possibility. This is not surprising. They are used to working with technology in teaching, such as through closed circuit TV especially, when male academics teach female students. They thought that using e-learning tools would help to provide a better learning experience for learners and make them feel more involved. Simultaneously, Internet-based training courses would help to increase the productivity of trainees and create more instructor-trainee interaction as well as interaction among trainees themselves.

Feedback from two academic staff, who are very enthusiastic about using new technology in the teaching process, illustrates these points:

"We need the introduction of the Internet in teaching because that will help solve some of the problems, mainly the shortage in academic staff members, especially on the women's side. It may solve some of the higher studies problems, for example, if we have one or two students who want to go in for post-graduate studies, it is difficult to begin with just two students only. E-learning can solve such problems effectively. Universities face a big problem finding ways to extend their postgraduate studies facilities. The new trend may solve this kind of problem."

Another one stated:

> *"I agree completely, e-learning is one of the current achievements of our time. I expect this type of learning will be an innovation in the life of mankind. If the process is designed and planned in a better way it will be a revolution in the field of education."*

Moreover, almost all academic staff believed that information technology and the Internet would have a clear influence on Saudi society, changing it in many aspects. For instance, the health sector in Saudi Arabia, such as the King Faisal Specialist Hospital and Research Centre (KFSHRC), follows the new changes in communications and is developing electronic medicine. In the field of electronic commerce, the experts expect new governmental rules to encourage it. They anticipate more banking services through the Internet.

In general, e-learning allows people in their homes and at work to access the Internet anytime. At the same time, it will bring together varied group of students who have knowledge, abilities and skills and interests in particular fields into virtual communities of practice. The same applies to the workplace; e-learning enables employees to collaborate among themselves, helping each other to learn.

In fact, Saudi people and organizations are not developing their use of the Internet as quickly as they need to. This is a result of Saudi employees, in general, having secure jobs, especially in the public sector. This means they do not have big incentives to change and develop. In other words, in Saudi Arabia there are differences between both various kinds of organizational setting and various levels of individual motivation to train and develop. That Saudi employees in the public sector are not generally encouraged to train is true. This is a feature of bad management or planning. That is one thing. But there is something more complex behind it: a cultural attitude that does not encourage people to think ahead or to be strategic in their thinking.

There is a need, therefore, for Internet-based training opportunities at work to develop. The development of such opportunities will help change attitudes to learning. Consequently, this will promote the efficiency of employees and prepare

them technically and practically to shoulder their responsibilities and exercise their authority.

Faculty members expect that distance training opportunities for employees will develop and such learning should offer women as many opportunities as men for career development.

Feedback from decision makers confirms this point:

> *"The new method will provide women with more training opportunities and men also, but the opportunities for women will be greater due to the unique position of women in this country and their close connection to their homes. So, if the arena is opened to women, they will have more chances than men. Moreover, the new method will override the traditional methods of training because it will save the trainee the travel and other problems."*

These kinds of new learning will help women maintain their religious identities and their educational development. Women can be part of the training revolution and the new technology. While acknowledging the traditional Saudi perception of women as homemakers, this social and cultural fact turns into an educational possibility. Because women are teachers in the home, they will be able to teach and learn using new methods.

Information technology in Saudi Arabia has encountered several obstacles to growth as the result of the current shortcoming of competition in telecommunications in the state. But Internet applications will increase, especially within government institutions, for instance, the Ministry of Interior, which deals with the public continuously. This will be an incentive for the Ministry of Higher Education to promote e-learning and e-training. These universities and higher educational institutions are not able to deliver high quality distance education.

However, curriculum development in e-learning is limited by the policies of the kingdom. It follows that e-learning will not develop in Saudi universities unless state policies change, especially those governing the recognition of courses and curricula. It demands, also, cooperation between Saudi universities, the professions and

government to achieve high quality e-learning courses. Without this, students, trainees and the society will not feel confident about education provided in this way.

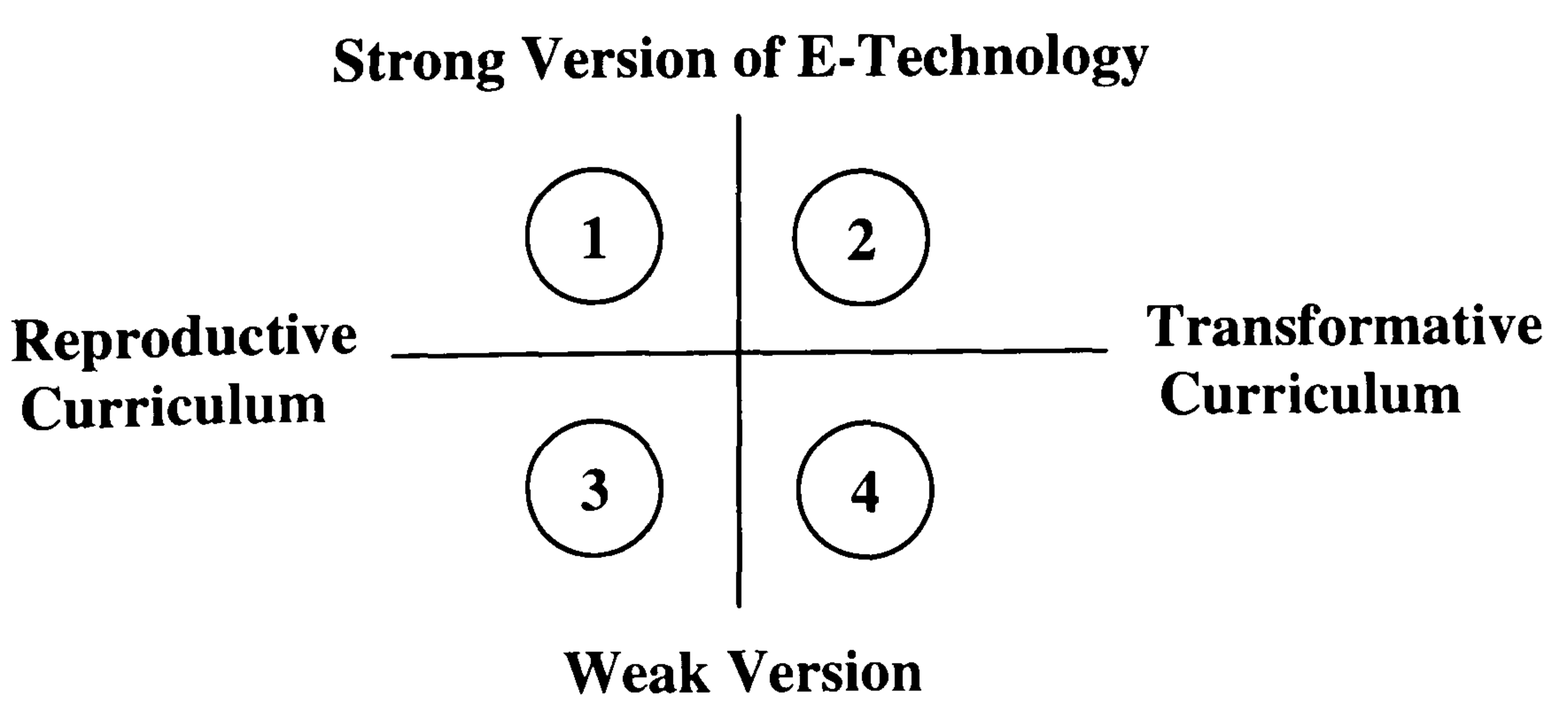
In the kingdom, however, there is a lack of cooperation between the diverse organizations and universities that are involved in continuing professional development of employees and teachers.

Advantages of e-learning

There is a growing tendency for respondents to perceive the advantages of using the Internet in teaching. They consider that the Internet offers flexibility of time and place in learning. Furthermore, the real-time updating of skills is a great advantage of distance Internet-based education. Learning and training through Internet-based courses have become available and accessible for people who live in remote areas, developing countries and for students with handicaps.

Within the new technology, anyone can use its tools to illustrate an idea. The power of e-learning, however, lies in the possibility of using new electronic methods to help students discover new ideas. In the literature of lifelong learning, a distinction is often made between reproductive and transformative learning (Garrick, 1998:27). One form passes on that which is already known to students. Transformative learning helps people to develop new ways of thinking. It helps them to become creative and to question what is already known. E-learning could play an important role in creating the conditions for transformative learning. This can be illustrated by figure 8.2 as follows:

Figure 8.2: Curriculum Design and Technology



If this is going to happen, educational managers will have to change their views about both technology and the curriculum. A strong view of the technology is one that tries to build on all its potential. A weak view sees it merely as a tool to aid study. A concern to reproduce existing knowledge and skills is one way to approach curriculum design. Another way looks to the future, to new ideas and ways of doing things. Managers and academics must be aware of the choices they can make.

From the above figure, which sets out four theoretically possible approaches to curricula, e-learning offers the possibility that students can use the full range of new technological tools and discover ideas, data, methods and forms of understanding beyond those understood by their teachers or described in the handbooks of their courses.

Difficulties and obstacles to e-learning

Academic staff thought that there were many obstacles facing the development of IT and Internet-based training in Saudi society and higher education. For example, they showed that the main difficulty is lack of IT training and they demand much more specific training to enable them to use the Internet effectively. In addition, experts, who can support distance learning and the use of technology in education, are in short supply in Saudi higher educational institutions. Feedback from a female academic confirmed this conclusion:

> *"Generally, and as education and training in the kingdom are still traditional and also the academic staff, I was surprised with the high percentage results of the study. I think that according to these results, if training is made available to the academic staff, this type of learning will be available very soon."*

The slow speed of the Internet is seen to be one of its disadvantages. The rate of access to the Internet in Saudi Arabia is high, but the Internet services are poor. This might be a significant factor preventing users – whether companies, institutions or individuals – from using the Internet and slowing the growth of electronic-commerce in Saudi Arabia. Other obstacles include Internet illiteracy, people's resistance, poor English language skills and lack of time.

Lack of belief in the idea of Internet-based training and learning and a lack of interest in applying it will constitute a major problem in Saudi society. Also, there are many still afraid to use the Internet and who have no faith in the positive role it could play. This is partly the result of poor publicity. People do not know what the Internet is, or what it can provide. The information media are not doing their job and academics and teachers are not aware, and consequently they fail to transfer new ideas and possibilities to the new generation.

Expectations for the future

Most of the academic staff emphasized that the roles of Saudi universities and of Saudi academics will be dramatically changed in the future because of the Internet. Information technology may change universities in quite profound ways. Higher education is taking on a global dimension. The global university may represent a profound challenge to all traditional models of higher education. At the moment in Saudi Arabia, this possibility is not being as extensively discussed as it should be. Academics, therefore, remain too often complacent about their future role.

The pressure on Saudi universities to innovate in teaching is high. There is a growing demand for places. The new generation of students is able to use IT and expect to use it as part of their studies. Saudi academics will be under greater pressure in the future to innovate in their curriculum development. They cannot avoid it.

Feedback on this research from a decision maker working in Imam Muhammad bin Saud Islamic University acknowledged some of these changes:

> *"As I imagine it, e-learning is an important solution for the increased numbers of students. The Imam Muhammad bin Saud Islamic University by adopting the association system, whereby the student enrolls and studies at home and comes at the end of the term for examinations, is developing this way. But e-learning is far better since the relation of the student with the university is not just the examinations. He can access lectures via the Internet and interact with his teachers, which will increase his knowledge. But the important issue in all this is to have programmes organized in a very good way."*

This system of association in Saudi Arabia is perhaps a model for universities both elsewhere in the kingdom and throughout the world. The Internet, in some subject

areas at least, reduces the requirement for students to study on campus in regular contact with teachers. The university can still control standards of achievement and understanding by controlling the examinations, which test these things.

The academics predicted that e-learning in the future would concentrate on the learners' needs for improved performance. And it might be more effective than traditional classroom – based work and will be less expensive as well.

The imagination of Saudi academic staff is limited by the kinds of leadership they are offered and by the priorities that are set for them. This leads to the hypothesis that if IT is to be used to its full potential in the kingdom, great changes will be needed in the prevailing model of what both a university and a higher education is and what both should mean.

The results showed that if Saudi Arabia is to expand part-time, work-based modes of study through e-learning, it will be necessary to alter the views of both government and academic staff about the nature of a higher education. Higher education can no longer be confined to what takes place within four walls between teachers and students. Many respondents and interviewees are confident and optimistic that Saudi universities and colleges will be ready to offer distance Internet-based training courses in the future. If government policies were well designed, the academic community would certainly support them positively. There are significant differences between university academic staff in their attitudes toward e-learning in in-service training. The findings revealed that there are slight differences with reference to age, area of specialization, academic position and years of experience, none of which are likely to create a significant resistance to the changes e-learning brings

But these differences in attitudes towards IT are closely related to the experience of academics themselves. Those with a lot of experience of IT are, in general, more enthusiastic about and aware of the future possibilities of its use.

Despite the positive attitudes of the respondents in Saudi universities and higher institutions, it is important to mention that the management of change in Saudi Arabian universities is difficult. Academics are busy with routine work. Unless there

are incentives, they will not change their work practices. There is currently little competition between universities to create a climate in which academics will actively seek to change their work, their courses and their use of IT. This places limits on the extent and speed of change in all areas of academic life, but particularly in relation to new curricula using new technology.

According to Kirkpatrick and Jakupec (2001: 62), when the academic staff are acquainted with the technologies they can explore their capabilities to integrate the new technology into their teaching. Gilmore (1998), and Christensen (1997) revealed that academic staff who have used the Internet as a tool in distance learning had more positive attitudes and significantly reduced anxiety than those who have not.

These findings are in agreement with some Saudi studies. Al-zumaia (2001), who examined the attitudes of staff members and administrators in the General Directorate for Private Institutes and Centres in Saudi Arabia towards Internet-based electronic data interchange in public organizations, revealed that participants had a positive attitude toward new technology and they did not worry about using computers and the Internet in the their own work.

Abahussain (1998: 96), in his study of the implementation of interactive television technology in distance higher education learning programmes in Saudi Arabia, supported the view that the wider use of interactive TV in higher education was both feasible and widely supported.

Cook (2000), emphasized that positive attitudes toward using computers and the Internet could benefit both staff members and students very much and the overall result of their achievement might be high. In order to be active and effective, however, e-learning needs educational change whether in learners or teachers. Learners have to take responsibility for their own learning. Teachers should adapt their expectations and practices to assist students who do not live in or near colleges.

In Saudi Arabia, because the Institute of Public Administration is the organization that provides and develops training courses, employees have wait for their turn, often

up to two to three years. This is a big problem. Technology can solve this via distance training.

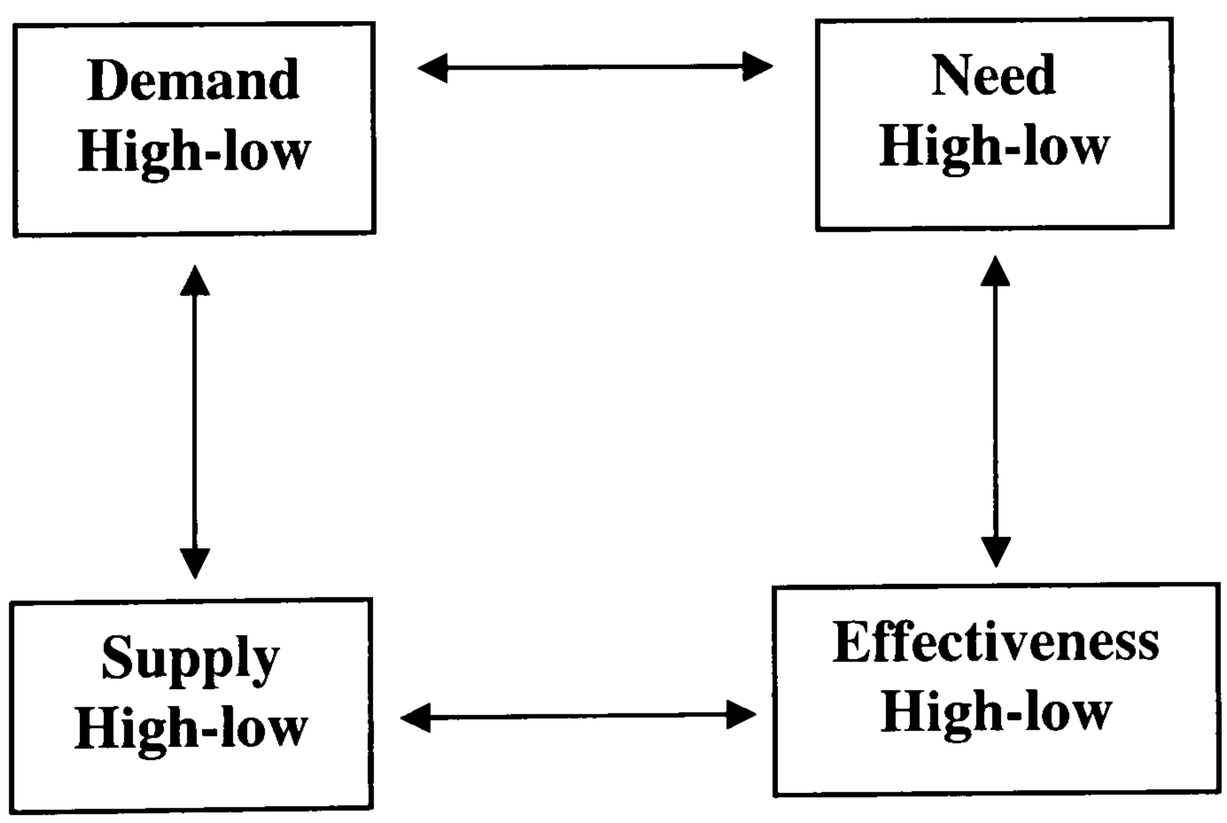
The Dean of the Computer Science College, commenting on this research, said that training employees in Saudi Arabia through Internet-based courses is necessary:

> *"Generally, learning through the Internet differs from general education. But there are differences and benefits, since the Internet is open and can train millions of people. In the traditional method presence is a must. In the kingdom, opportunities for learning are not very big."*

The relationship between the demand and supply of training opportunities for people comes into view at this point. Castells (2001) noted that the revolution in communications was in some parts of the world 'education-led': it is likely that this will be the case in Saudi Arabia. This does not just happen, however; it needs to be made to happen. It needs leadership.

The links between supply and demand (whether in the public sector or the private) can be represented as follows:

Figure 8.3: Demand and Supply of Training: A Model



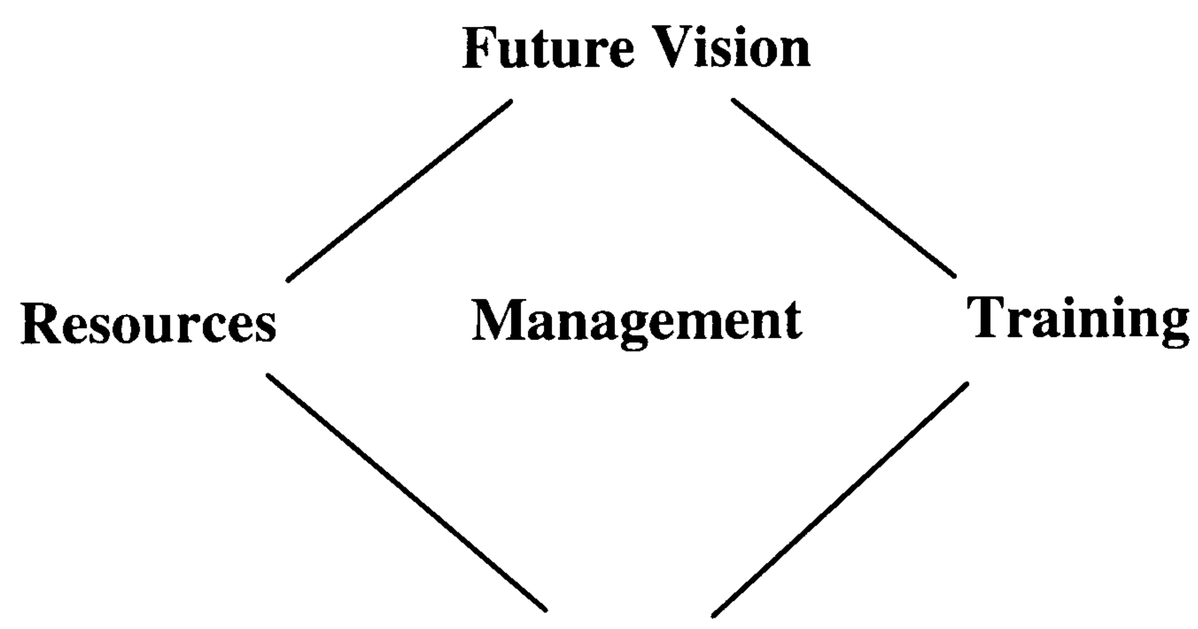
This model (see Figure 8.3) hypothesizes that when the supply of good training is high, then both the need for it and the demand for it will also be high, for these factors are inter-linked and inter-dependent. They affect one another. Under the right conditions, the supply of courses will grow to meet and, indeed, encourage demand.

Under other conditions, there will be a vicious circle of decline rather than a virtuous circle of growth. In Saudi Arabia, the public sector dominates the economy and does not supply the high quality training that people need or demand. There are waiting lists for courses but the real demand is not high. This is because training programmes are not well-related to personal or operational needs. The relevance of this for e-learning is that, in principle, high quality courses can be provided in ways that meet both individual needs and demands so that people are not dependent on the bureaucracy of public sector provided courses

8.2 The study recommendations

This study concentrated on academic staff attitudes toward e-learning and in-service training. Distance Internet-based learning and training must not be considered as a replacement for the traditional educational system (face to face teaching and learning), but it has to be used complementary to traditional methods in order to reach people in remote areas, or in other countries, or even in the same place, but who have special circumstances. Naturally, this new approach has advantages and disadvantages. Nevertheless, the success of its implementation relies on lots of factors at different levels in the system – policy, resources, management and imagination and the willingness of academic staff to use the Internet in teaching. These elements are all interlinked and can be represented as follows.

Figure 8.4: Analytical Framework: Managing Higher Education



It has become clear in the course of interpreting the data of this study that these features of the ***structure*** of higher education must come into view to understand the attitudes that can be found within higher educational institutions. Each element of

this perspective suggests ways forward to promote the development of e-learning in the kingdom.

The recommendations that follow from this approach can only be general ones. It is not the purpose of this study to set out a specific delivery plan for e-learning in the Kingdom of Saudi Arabia. Each element of these recommendations needs further debate and planning among the people who will deliver them.

8.2.1 Recommendations related to e-learning and e-training possibilities

- The Internet, in fact, offers possibilities for the worlds of training and education to become integrated, to become one. It offers the promise of breaking down the educational division of labour of modern societies. Just because a man is a mechanic is no reason to prevent him from becoming a poet. Whether this happens, of course, depends very much on the prevailing view in a society of the purposes of education and of the possibilities inherent in the new technology. If our imagination is limited, then what we provide on the Internet will also be limited. If this is the case, then there is a real job to be done in helping Saudi academics appreciate the power and possibility of e-learning. If e-learning is to develop in the country, it is important to do more than simply train experts in this field. All academics will need help to see and appreciate what the Internet might be able to offer them. This is a key task for CPD for academics that all academic institutions should take seriously and manage well.
- A lot of people in Saudi society believe that traditional education is better than distance learning. This cannot be upheld. The reason is simple: distance learning can mean many different things. There is a need to develop a clearer typology of all the different forms of teaching and learning that are possible under the broad heading of distance education. Courses can be tailored to individual needs or made available to groups. They can be short or long, accredited or unaccredited, based at initial levels of education or on high levels of specialized knowledge. They can be open or closed. We may need other distinctions to describe fully the range of possibilities. This leads to the

conclusion that distance learning in some contexts would be far more effective than traditional learning methods and vice-versa.

8.2.2 Recommendations related to attitude change

- In Saudi Arabia the mass media have recently progressed very rapidly as a result of the advancement in the means of communication. Therefore, the mass media campaign has to be intensified to make changes in the Saudi people's attitudes toward using the Internet in learning and training processes through TV programmes and newspapers.

Feedback from one academic supported this line of argument in the suggestion that:

> *"There should be a specific organization (universities) that coordinates with the media organizations, to create a real culture on all level of society of e-learning and the use of the Internet and all modern technology."*

- There is a relationship between the supply of and demand for e-learning opportunities in the workplace. The provision of e-learning opportunities is a complex outcome of the interaction of supply and demand. In Saudi Arabia, special circumstances influence this relationship. Saudi employees, in general, have secure jobs, especially in the public sector. This means they do not have big incentives to change and develop. From this point, there is a need, therefore, for work-based training opportunities to develop. The development of such opportunities will help change attitudes to learning.
- Recent developments in Saudi higher and further education suggest that students are now more willing to take up technical and vocational courses. They see that those who have a general higher education, often to postgraduate level, are not employed in high-paying jobs. The press in Saudi Arabia from time to time highlights these problems, so that more people are becoming aware of the need to have relevant skills and qualifications. Under these circumstances, more people can be expected to develop skills and qualifications in IT. Saudis who study abroad are keen to take up studies in computing and IT. The climate of opinion in the kingdom towards new forms of learning is changing. The recommendation here is that the government has

a responsibility to support that change. It is a necessary, though not sufficient, condition for e-learning to grow.

8.2.3 Recommendations related to government policies

- Some Saudi employers do not encourage their staff to train. Staff will go on courses if they are required to, but if it is not obligatory, they are very likely to remain in their jobs and not to seek further development. This is a feature of the Saudi economy for it is dominated by public sector organizations and the personnel policies within these organizations are in fact determined by the government. If there was a clearer commitment to personnel development in government policies, the demand for work-based training and development would be higher than it is.

Feedback from a decision maker who works at Institute of Public Administration produced the following comment:

> *"Supposedly, a good environment for e-learning or training must be established, meaning the need to have strategic planning for such issues. As regards training, I think it is really in need of an authorized organization from the government and the IPA to train government officials."*

- The study findings revealed that academic staff, who see opportunities for professional advancement on the basis of curriculum development, are much more likely to have positive attitudes to IT than those lacking such prospects. If this is the case, Saudi policy on e-learning must include strategies to enable career development for academic staff in this field.
- Curriculum development in this field of e-learning is limited by the policies of the state. It follows that e-learning will not develop in Saudi universities unless state policies change, especially those governing the recognition of courses and curricula.
- Public sector employees are not well-rewarded in comparison to those in the private sector. It is well known that many well-qualified public sector professionals often offer their services outside normal working hours to organizations in the private sector. This reduces their ability to cooperate

among themselves. There is an issue here of the relative salary and conditions between the public and private sectors that the government must resolve.

8.2.4 Recommendations related to universities and higher education institutions

- According to Cohn (2000: online), internet-based training and e-learning is being presented in the marketplace as the next revolution in the training and education industry. In the USA, there are more than 5000 companies offering e-training nowadays. Saudi universities and commercial organizations should benefit from western experience in terms of Internet-based training and e-learning. It will help them to keep pace with the knowledge explosion and advances in technology. It is likely, however, that many features of their current curricula and academic organization will change profoundly.
- Saudi universities and the Institute of Public Administration play key roles in Saudi society in terms of teaching and training. They should expand and open more branches in different cities in the state, and also increase the number of faculty members in order to work in these new branches.
- In Saudi Arabia, the government, through the IPA, dominates the training market. Individuals have come to expect that their personal development is something to be paid for by the state. There is not a well-developed private training market and Saudi universities, although allowed to offer income-generating training, do not do so with much enthusiasm. If they do provide such programmes, then individuals are expected to pay for them themselves. This limits the demand for courses. Internet-based training and e-learning will only flourish in the context of a growing training market. This is a real limitation in the current circumstances of Saudi Arabia.

Feedback from a decision maker noted that it was not the universities alone that had responsibility for the development of e-learning. In the Saudi context, they had to cooperate with King Abdulaziz City for Science and Technology and with the infrastructure provider, the Saudi Communication Company. This highlights the special circumstances of the ways the Saudi state governs electronic

communications. Universities are obliged to work within this framework. He put it this way:

> *"I think the organization primary responsible for the whole thing is King Abdulaziz City for Science and Technology, and not the universities. The responsibility is joint between the Saudi Communication Company, the Saudi universities and King Abdulaziz City for Science and Technology."*

- Because each university has its own special profile of social development e.g. Imam University concentrates on Islamic and Arabic sciences while King Saud university concentrates more on science and engineering, e-course development in Saudi Arabia must build on the expertise of each different institution and responsibility for this must come from within each institution. The managers of each institution, therefore, have to develop the local infrastructure to be able to develop e-courses.
- It is highly important that universities and higher educational institutions, which are planning to use Internet-based courses, must think to adjust the workload and training of the academic staff that are involved. In addition, they need strong administrative support and career development.

8.2.5 Recommendations related to training opportunities

- The labour market of Saudi Arabia is inflexible. Graduates are expected to take graduate level jobs. There are at the moment high levels of graduate unemployment. In addition, many graduates take a long time to find a job. Under these circumstances, they are unlikely to take seriously their need to improve IT skills, because they do not feel the need for it. They use IT for recreation purposes, not personal or vocational development. The general point is this: motivation to continue to learn through IT is related to employment opportunities. There must be a need and an interest that can be satisfied. If neither exists, people will not become e-learners.
- When people in general are given the opportunity to use new technology, their skills and knowledge will develop, opening up their minds to new possibilities for e-learning and e-training.
- As a result of the shortage of trained Saudi manpower, the training of employees has become a national goal in the five-year development plans. It

is highly important for the Saudi government to adopt Internet-based training to bridge the gap of training shortages for Saudi employees. However, if those employees do not understand the training process through the Internet, this means both trainers and trainees will not use the technology effectively.

- There is an important role of IT in the lives of Saudi women. Women in Saudi Arabia stay at home. IT provides a means to enable them to continue to learn and to develop. They are very aware of the lifestyles of women in other parts of the Arab world and abroad, in Europe and the USA. E-learning helps women maintain their religious identities and their educational development.

8.2.6 The ideal typical university of the future

In western social science, influenced by the German Sociologist, Max Weber, there is a particular methodological idea – the ideal type (Martindale, 1963, Giddens, 1971). The ideal type is a description of something that exists only in theory. It is an abstract idea, a model against which particular social arrangements or institutions can be compared. It is a tool to help us think analytically. Examples of such types in this field include those of the virtual or global university (Blass, 2001), or the 'post-modern' university (Barnett 1999). Information technology is widely believed to be bringing major changes to universities. Barnett suggests that it is 'dissolving' them (1999:17) i.e. breaking down all the boundaries between them and other research and training institutions in society.

The ideal typical university of the future in Saudi Arabia will probably have the following features. There will be a clear policy commitment to promote the new technology. There will be a competent and committed leadership to promote it. Leaders will make sure that the institution is staffed with appropriate experts; that it has the necessary infrastructure and the training to support its operation. The institution will need adequate resources and it is unlikely that the government will be able to provide all that is necessary. Institutions, therefore, will have to generate more of their own income from student fees and to define new markets for students. New kinds of student will only be recruited on the basis of new kinds of courses and course materials. The ideal typical IT-based university is changing continuously. It has to because of competition in the global market place for higher education. It

adapts to new circumstances and possibilities. Its leaders work hard to define those new possibilities. When these elements are in place, the attitudes and motivation of both staff and students to develop their work using the new technology increases.

These features help us design an audit tool or a list of criteria against which to evaluate the developmental readiness of different institutions to use the new technology creatively.

The general conclusion from data and recommendations here is that internet-based learning (training) will develop in Saudi Arabia if the following changes happen. The audit tool enables us to check for each institution or department the following things:

At the Macro Level

- Resources – Are they adequate?
- Culture change in the society – Are these understood?
- Infrastructure – Is it in place?
- Openness to the wider world – Are the new frameworks of thinking promoted?

At the Meso Level

- Well-qualified staff – How well are staff qualified?
- Teams – Do teams or 'communities of practice' exist?
- Leadership – What is the quality of leadership?
- Development capacity – Is this strong or weak?
- Teaching styles – Are these varied?
- Help to overcome fear – How well are staff and students supported?

At the Micro Level

- Motivation – Are students well-motivated?
- Rewarded – Are students and staff appropriately rewarded?
- Understanding Internet-based learning and training – Are all users well trained?

- Understanding information technology skills – Are all users well trained?
- Work, thinking patterns – Are students helped to change?

If these changes do not happen, internet-based learning and training will remain poorly understood, uneven in its application and not used to its full potential.

Feedback from many Saudi academics about the findings and recommendations of this research support the general point of these conclusions. One said:

> *"The study recommendations are practical and, in my opinion, they touch the belief of those concerned with training in universities. But if the study had suggested recommendations related to strategies, which facilitated reaching the best results and the responsibilities of the universities and academic staff, it might have achieved better results."*

Another male academic evaluated the findings and recommendations of this study. He said:

> *"Generally, I think the results of the study reveal the reality of the situations in the kingdom, and it coincides to a great degree with what I have expected in this aspect. The results are closely related to the questions of the study and the recommendations are related to the results. I believe this study is very important especially in the current times in this country."*

Another said:

> *"In my opinion, the results of the study are consistent with what I have expected from the attitudes of the academic staff towards using the Internet in training, as well as in learning and education processes generally. Hence, I see that these results reflect to a great degree the reality of academic staff attitudes. As regards the recommendations, they seem not specific in general and some of them are expected and commonsense. I would prefer if the recommendations included specific procedural recommendations, which could be used by decision-makers or the concerned organization."*

Such comments, though a little disappointing, are interesting. They support the broad recommendations but look forward to having more detail. It is perhaps not the responsibility of the researcher to provide such detail. That is for policy-makers and managers in higher education. This research has, however, clarified the areas in which changes are required.

8.3 Further Research

As is the case with most research in social studies, this study has its limitations – in its study tools, the sample selection, the data collection procedures and the methodology. Future researchers may be interested to conduct other studies regarding the issues of work Internet-based training courses:

1. This study focuses on attitudes of faculty members at universities and colleges in Riyadh City. Consequently, interested future researchers are encouraged to conduct a countrywide replication of the study in order to assure the reliability and generality of the findings.
2. Extensive research is needed to consider attitudes and views of high-ranking administrators in the Ministry of Higher Education, Saudi universities and colleges toward the adoption and implementation of Internet-based learning and training. This is work needed at the macro level. Much more needs to be known about how key policy makers view information technology and the future of Saudi universities.
3. The study finding revealed that, in general, academic staff that took part in this study have positive attitudes toward e-learning and in-service training. It is necessary to conduct another study to determine the attitudes of the employers and employees towards like courses. Training markets in Saudi Arabia are not well-developed or understood. Work is needed on how employers and managers in both public and private sector organizations view the future of work-based training.

Feedback from a female academic highlighted another possible approach to studies in this field. She said:

> *"It would have been better if the researcher had limited his study to one sample only (employees or students), devised a training programme to be used via the technology and then evaluated the programme after a period of time and exposed the sample to it to see the degree of its response and the change that had been achieved by the training."*

This is a useful suggestion: to undertake further, action-research based on case studies of how different groups experience e-learning and training.

4. In the future, if there are public or private institutions that provide Internet-based learning and training programmes, more research is required to investigate and evaluate the strengths and weakness points of these courses and how their curricula were designed, implemented and evaluated.

It would not be difficult to define many new research projects that would be worthwhile in this field. The most important task, however, is to create a climate of discussion through the building of a community of practice of people interested in e-learning so that new questions about this field can be raised.

International research highlights that IT changes:

- Research;
- Academic organization;
- Models of teaching and learning;
- The relationship between universities and society;
- Interaction between academics and learners.

How these changes will take place in Saudi Arabia needs to be discussed and researched within the academic community. A framework is needed to enable such discussions to take place. If this study contributes to that, it will have been worthwhile.

If universities develop these discussions, they will be able to encourage employers and managers in organizations to have similar debates. In this way, attitudes to training and development in the work place will change. Saudi Arabia needs this to happen. If this study has helped show how it can be done, then it will have achieved its main aim.

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APPENDICES

Appendix A: The Questionnaire (English & Arabic)

Dear colleagues:

This questionnaire has been developed to enable me to collect data for my research for my Doctoral Degree from the School of Education in the University of Durham, United Kingdom.

The research is designed to find out about the attitudes of university academic staff toward in-service training via the Internet in Saudi Arabia in order to improve the Continuous Professional Development of teachers and other public sector employees. Your opinions about these issues are very important for this study. Please note that your participation in this study is confidential. Nobody other than the researcher will look at, or use, your answers to the questionnaire. Please do not write your name on the questionnaire if you do not wish to. In addition to the questionnaire I shall interview colleagues. If you would, in principle, be willing to be interviewed as part of my research I would be grateful if you could supply your name and your address on the returned questionnaire.

The questionnaire is divided into four sections. The first section is about you and your career. The second part of this questionnaire is concerned with your views about the Internet and the training of academic staff. The third section is about staff's attitudes toward in-service training via the Internet. The fourth part of the questionnaire is concerned with:

1- **Cooperation between universities and colleges;**
2- **Curriculum change;**
3- **The advantages of the Internet-based training;**
4- **The difficulties of the Internet-based training;**
5- **The expectations of university staff about the development of this work in the future.**

After you have completed the questionnaire, please check it to be sure that all items have been answered. Thank you for your cooperation and positive participation in this study. Thank you in anticipation.

Sincerely yours

Abdulmohsen A. Al-Ghadyan

School of Education

University of Durham

Section One: Personal Data

For the purpose of analysis, I would be grateful if you could provide me with the following personal information.

Name: ----------

Name of Institution :----------

Telephone number: ----------

E- mail: ----------

For each question one answer is required unless otherwise indicated. Please tick in the box at the side of your chosen answer

1) Gender:

a) male ☐ **b) female** ☐

2) Age:

a) 20-30 years old ☐ **c) 41-50 years old** ☐

b) 31-40 years old ☐ **d) over 50 years old** ☐

3) Main area of specialisation:

a) Art ☐ **b) Science** ☐

4) Academic position

a) Assistant professor ☐

b) Associate professor ☐

c) Full professor ☐

5) Years of teaching experience:

a) 1-5 years ☐ **b) 6-10 years** ☐

c) 11-15 years ☐ **d) more than 15 years** ☐

6) Do you have a personal computer?

at home: **a) yes** ☐ **b) no** ☐

at work: **a) yes** ☐ **b) no** ☐

7) Do you have Internet connections in your main rooms used for teaching?

a) yes ☐ **b) no** ☐

8) Do you consider yourself to be experienced in using distance Internet-based teaching methods?

No experience	Little experience	Casual user	Experienced	Very experienced
☐	☐	☐	☐	☐

9) Do you use the Internet for any of the following? (Tick all that apply)

a) Teaching ☐ **b) Research** ☐

c) Recreation/ personal interest ☐ **d) Communication** ☐

e) University administration ☐ **f) Other professional** ☐

Section Two: Academic Staff and information technology and Internet training

Please respond to the following questions with either YES or NO.

Number	Item	Yes	No
10	**Have you had any formal Information Technology training?**		
11	**Have you had training in computer connection to campus resources?**		
12	**Have you had training in the utilization of the Internet's resources and applications?**		
13	**Have you had special training for this new pedagogical method (computer-based distance education)?**		
14	**Do you believe staff have enough time to develop their skills with the Internet?**		
15	**Does the university administration encourage faculty members to attend information technology training courses?**		

In general, how would you describe the training you have received in this field of information technology? Please indicate your views about the following statements.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
16	**My information technology training was interesting.**					
17	**The information technology courses I attended were helpful to me.**					
18	**The people who taught me information technology courses were good teachers.**					
19	**I enjoyed learning about information technology.**					

Section Three: Academic staff's attitudes toward in-service training via the Internet.

The following statements survey aspects or matters concerning in-service training via the Internet. Please respond to each statement by showing your agreement or disagreement with the statement. Please mark the category that describes your opinion.

Enthusiasm

Instructions: please select one for each item to indicate your feeling.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
20	I would like to learn more about integrating the use of the Internet into my teaching.					
21	I would like to spend more time supplying training courses via the Internet.					
22	I will teach courses via the Internet as soon as possible.					

Anxiety

Instructions: please select one for each item to indicate your feeling.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
23	Working with distance Internet-based training course makes me feel very anxious.					
24	Internet-based training courses frustrate me.					
25	I hesitate to teach through the Internet for fear of making mistakes I cannot correct.					
26	I have a lot of self-confidence when it comes to working with distance Internet-based training course.					

E-Learning tools (e-mail, videoconference,….)

Instructions: please select one for each item to indicate your feeling.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
27	The use of e-Learning tools makes the trainee feel more involved.					
28	The use of e-Learning tools helps provide a better learning experience for trainees.					
29	The use of e-Learning tools creates more interaction between trainee and instructor.					

Impact on Society

The next few questions concern your views about the wider implications for society and higher education of this new technology.

Instructions: please select one for each item to indicate your feeling.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
30	The Internet isolates people by inhibiting normal social interactions among users.					
31	Universities and colleges should do more to train already qualified experts and technicians for their roles in the society.					
32	Higher education institutions should play an important role helping organizations in society and the economy to develop and change.					

Productivity

Instructions: please select one for each item to indicate your feeling.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
33	Training through the Internet would help trainees improve their skills.					
34	Training through the Internet would stimulate creativity in trainees.					
35	Internet training courses would significantly improve the overall quality of my trainees' education.					
36	The Internet can be a useful instructional aid in almost all subject areas.					
37	Courses via the Internet can be used to save academic staff 's time.					
38	The Internet-based training courses would increase my success in teaching.					
39	If I used the Internet, I would get a better picture of developments in my subject.					

Gender Issues

Instructions: please select one for each item to indicate your feeling.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
40	Men and women are just as capable as each other in teaching through the Internet.					
41	Distance Internet-based teaching and learning should offer women as many opportunities as men for career development.					
42	It is likely in the future that women will play as important a role as men in developing distance Internet-based teaching and learning in higher education.					

Confidence

Instructions: please select one for each item to indicate your feeling.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
43	The challenge of developing training courses via the Internet does not appeal to me.					
44	I do not think I would deliver advanced distance Internet-based training courses.					
45	I am sure I could learn the language and skills of computer-based learning.					

Section Four: Higher education and the Internet in Saudi Arabia.

1. Co-operation between Higher Institutions

Instructions: please select one for each item to indicate your feeling.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
46	It is easy for academic staffs to co-operate with other Saudi higher education institutions.					
47	The Internet has a huge potential to make effective links between universities and colleges.					
48	Co-operation between higher education institutions can produce good quality internet training courses.					
49	Universities and colleges can cooperate with other organisations in terms of providing distance Internet-based training courses for their employees at work.					
50	Cooperation between faculty members in higher education institutions will improve the training process for employees.					

2. Curricula Change

What changes if anything, do you need to make to enable the Internet to become an integral part of your university's curricula activities? Please click on the appropriate column.

Instructions: please select one for each item to indicate your feeling.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
51	I need more opportunities to work with colleagues to become more proficient using the Internet-enhanced curriculum units.					

3. Advantages

What do you see as major advantages of the Internet-based training courses?

Instructions: please select one for each item to indicate your feeling.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
52	The Internet offers new opportunities for adult education and training.					
53	The Internet will help in the development of trainee-centered education.					
54	Computer-assisted learning is a cost-effective way to make education and training accessible.					
55	The Internet offers flexibility of time and place in learning.					
56	Computer-based learning offers a rich variety of learning resources.					
57	Real-time updating of skills is a great advantage of distance Internet-based education.					
58	Real-time exchange of opinions is a great advantage of distance Internet-based education.					
59	Internet-based teaching and learning is a good way to solve practical problems at work quickly.					
60	The Internet is a tool to promote cooperative learning among trainees themselves.					

4. Difficulties

What problems have you encountered when using the Internet in your work?

Instructions: please select one for each item to indicate how you feel.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
61	I am often limited by my lack of technical knowledge in using the Internet.					
62	The costs of using the Internet are too high.					
63	I need much more specific training to enable me to use the Internet effectively.					

5. Expectations

Please choose one of these choices that best reflects your belief where.

Instructions: please select one for each item to indicate your feeling.

SD= Strongly Disagree, D= Disagree, U= Undecided, A= Agree, SA= Strongly Agree

Number	Items	SD	D	U	A	SA
64	I believe that the role of universities and colleges will be dramatically changed because of the Internet in the future.					
65	I believe that the role of the academic staff will be dramatically changed because of the Internet in the future.					
66	I believe that I am a better academic using new technology.					
67	The trainees will change from passive learners to active learners by using Internet-based training.					
68	The Internet can help accommodate different learning and training styles.					
69	I am confident that in the future, universities and colleges in Saudi Arabia will be ready to offer distance Internet-based training courses.					
70	I am confident that in the future, faculty members will be ready to teach through distance Internet-based courses.					
71	I am confident that in the future, the quality of internet-based courses will be the same as non-Internet-based courses.					

بسم الله الرحمن الرحيم

عضو هيئة التدريس المحترم

السلام عليكم ورحمة الله وبركاته

تعد هذه الاستبانة جزءاً من متطلبات نيل درجة الدكتوراه في التدريب والتطوير الوظيفي المستمر في كلية التربية التابعة لجامعة درم في المملكة المتحدة.

وقد صممت الدراسة للكشف عن اتجاهات أعضاء هيئة التدريس نحو التدريب أثناء الخدمة عبر الإنترنت في المملكة العربية السعودية، وذلك رفعا لكفاءة المستوى الوظيفي للمدرسين، وموظفي القطاع العام وتحسين أدائهم.

آراؤك عن هذا الموضوع مهمّة جدًّا لهذه الدّراسة. كما أن مشاركتك في هذه الدّراسة وإجاباتك على أسئلتها ستحاط بسرية تامة، ولن يطلع عليها أحد سوى الباحث. لذا يمكنك عدم كتابة الاسم على الاستبانة في حالة الرغبة في ذلك. ولأن الباحث سيجري بعض المقابلات الشخصية أو المحاورات الهاتفية.فإنه يأمل التلطف عند موافقتك على المشاركة فيها لتكون جزءاً من هذه الدراسة، كتابة الاسم والجهة التي تعمل بها ورقم الهاتف وبريدك الإلكتروني على الاستبانة المعادة.

تنقسم الاستبانة إلى أربعة أقسام. القسم الأول يتعلق بمعلومات شخصية ومهنية عن أعضاء هيئة التدريس. و القسم الثاني خبرات ورؤى أعضاء هيئة التدريس عن الإنترنت وتدربهم على التكنولوجيا الحديثة. أما القسم الثالث فيركز على اتجاهاتهم نحو استخدام الإنترنت في تدريب وتعليم موظفي الدولة و هم على رأس العمل. وأخيرا القسم الرابع يتكون من الآتي:

1- التعاون بين الجامعات والكليات ومؤسسات التعليم العالي.

2- إجراء تغييرات على المناهج والمقررات.

3- مزايا وفوائد استخدام الإنترنت في التعليم والتدريب.

4- الصعوبات في استخدام الإنترنت في التعليم والتدريب.

5- توقعات أعضاء هيئة التدريس حول مدى نمو هذا النوع من التعليم والتدريب في المستقبل.

وبعد الانتهاء من الإجابة عن الاستبانة، يرجى التأكد من استيفاء الإجابة على جميع فقراتها. شاكرا للجميع التعاون، وجزاكم الله خيرًا.

الباحث

عبد المحسن بن عبد الرزاق الغديان

كلية التربية

جامعة درم (المملكة المتحدة)

القسم الأول معلومات شخصية

الاسم: ----------

اسم الجامعة / الكلية / المعهد: ----------

رقم الهاتف: ----------

البريد الإلكتروني: ----------

من فضلك ضع إشارة (√) داخل المربع أمام كل خيار. علما أن كل سؤال له إجابة واحدة ما لم يوضح غير ذلك.

1) الجنس

أ) ذكر ☐ ب) أنثى ☐

2) العمر

أ) 20 – 30 سنة ☐ ب) 31 – 40 سنة ☐

ج) 41- 50 سنة ☐ د) أكثر من 50 سنة ☐

3) التخصص

أ) أدبي ☐ ب) علمي ☐

4) الدرجة العلمية

أ) أستاذ مساعد ☐

ب) أستاذ مشارك ☐

ج) أستاذ ☐

5) سنوات الخبرة

أ) 1- 5 سنوات ☐

ب) 6 - 10 سنوات ☐

ج) 11- 15 سنة ☐

د) أكثر من 15 سنة ☐

6) هل لديك جهاز حاسب آلي شخصي في؟

أ) المنزل أ) نعم ☐ ب) لا ☐

ب) العمل أ) نعم ☐ ب) لا ☐

7) هل لديك اتصال مباشر بالإنترنت في الأماكن الرئيسة للتدريس؟

أ) نعم ☐ ب) لا ☐

8) هل تعد نفسك متمكناً من استخدام الإنترنت في التعليم عن بعد؟

ذو خبرة عالية	خبير	مستخدم عادي	قليل الخبرة	ليس لدي خبرة
☐	☐	☐	☐	☐

9) هل تستخدم الإنترنت لأحد الأسباب التالية ؟ (من الممكن اختيار أكثر من إجابة واحدة)

1) التدريس ☐

2) البحث ☐

3) الترفيه والمتعة ☐

4) الاتصال ☐

5) عمل إداري داخل الجامعة ☐

6) أغراض أخرى ☐

القسم الثاني : أعضاء هيئة التدريس والتدريب على الإنترنت

الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	نعم	لا
10	هل تدربت رسميا من قبل على تقنية المعلومات؟		
11	هل تدربت على كيفية استخدام الحاسب الآلي في الحصول على مصادر المعلومات في الجامعة؟		
12	هل تدربت على كيفية الاستفادة من موارد المعلومات والتطبيقات المتاحة بواسطة الإنترنت؟		
13	هل تدربت بشكل خاص على هذه الطريقة الجديدة في التعلم (التعليم عن بعد بواسطة الإنترنت)؟		
14	هل تتوقع أن لدى أعضاء هيئة التدريس الوقت الكافي لتطوير مهاراتهم في استخدام الإنترنت؟		
15	هل تشجع إدارة الجامعة أعضاء هيئة التدريس على الالتحاق بدورات تدريبية فيما يتعلق بتكنولوجيا التعليم؟		

ما هو تقييمك العام للتدريب الذي تلقّيته فيما يتعلق بتكنولوجيا المعلومات؟ الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التعليمات: الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
16	كان التدريب المتعلق بتقنية المعلومات ممتعاً.					
17	استفدت من برامج التدريب الخاصة بالتقنية الحديثة التي حضرتها.					
18	المدربون الذين قاموا بالتدريب في هذه البرامج كانوا جيدين .					
19	استمتع بتعلم بعض الجوانب المتعلقة بتقنية المعلومات الحديثة.					

القسم الثالث: اتجاهات أعضاء هيئة التدريس نحو تدريب الموظفين أثناء الخدمة عن طريق الإنترنت.

العبارات التالية تستطلع آراء أعضاء هيئة التدريس فيما يتعلق بتدريب الموظفين أثناء الخدمة عبر الإنترنت.
الرجاء الإجابة على العبارات الآتية بما تراه مناسبا.

الحماس

التعليمات: الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

أوافق بشدة أوافق غير متأكد غير موافق لا أوافق على الإطلاق

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
20	أرغب في أن أتعلم كثيراً من أجل تسخير الإنترنت في عملية التدريس.					
21	أرغب في قضاء وقت أطول للقيام بعملية التعليم والتدريب عن طريق الإنترنت.					
22	سوف أقوم بالتدريس عبر الإنترنت في أسرع وقت ممكن.					

القلق

التعليمات: الرجاء وضع إشارة (√) أمام الإجابة المناسبة

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
23	العمل من خلال برامج التدريب عن بعد باستخدام الإنترنت يشعرني بالتوتر الشديد.					
24	برامج التدريب عن بعد باستخدام الإنترنت تجعلني أشعر بالإحباط.					
25	أتردد في التدريس عبر الإنترنت خوفا من الخطأ بشكل متكرر ولا أستطيع تصحيح هذه الأخطاء.					
26	أشعر بالثقة بالنفس عندما أعمل بالتدريب عن بعد من خلال استخدام الإنترنت.					

أدوات التعليم الإلكتروني (البريد الإلكتروني.....)

التعليمات: الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
27	استخدام أدوات التعليم الإلكتروني تجعل المتدرب يشعر بالاندماج في هذا النوع من التعليم.					
28	استخدام أدوات التعليم الإلكتروني تساعد المتدرب على التزود بخبرات تعليمية أفضل.					
29	استخدام أدوات التعليم الإلكتروني يحقق تفاعلاً بدرجة أكبر بين المتدرّب و المدرب .					

أثر التقنية الحديثة و الجامعات على المجتمع

تدور الأسئلة الآتية حول وجهة النظر تجاه التأثير الواسع للتقنية الحديثة والجامعات على المجتمع.

التعليمات: الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
30	تعزل الإنترنت المستخدمين لها عن التفاعل مع باقي أفراد المجتمع.					
31	يجب على الجامعات والكليات أن تعمل على تدريب الموظفين والخبراء المؤهلين ليؤدوا دورهم في المجتمع على أكمل وجه.					
32	يجب أن تؤدي مؤسسات التعليم العالي دوراً مهماً في تقديم العون لمؤسسات القطاعين العام والخاص في المجتمع من أجل تطوير وتحسين الحياة الاقتصادية والاجتماعية للأفراد .					

الإنتاجية

التعليمات: الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
33	يساعد التّدريب من خلال الإنترنت المتدرّبين في تحسين مهاراتهم.					
34	سينمي التّدريب بواسطة الإنترنت الجانب الإبداعي في المتدرّبين					

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
35	ستحسن برامج التدريب عن طريق الإنترنت من جودة التعليم للمتدربين.					
36	يمكن أن تكون الإنترنت أداة تعليميّة مفيدة لجميع التخصصات تقريبًا.					
37	يمكن أن توفر الدورات التي تتم بواسطة الإنترنت وقت أعضاء هيئة التدريس.					
38	ستؤدي الدورات التدريبية عن طريق الإنترنت إلى زيادة نجاحي في التدريس.					
39	إذا استخدمت الإنترنت سأفهم بصورة أفضل التطورات التي حدثت في مجال تخصصي .					

القضايا المتعلقة بنوع الجنس

التعليمات: الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
40	الرجال والنساء لديهم القدرات نفسها للتدريس عن طريق الإنترنت.					
41	التعليم والتدريس عن بعد من خلال الإنترنت يجب أن يعرض للنساء فرصا مساوية لفرص الرجال في مجال التطوير الوظيفي.					
42	من المتوقع أن تؤدي المرأة دوراً مهماً كدور الرجل في تطوير التعليم عن بعد عن طريق الإنترنت فيما يتعلق بالتعليم الجامعي في المستقبل.					

الـثـقــة

التعليمات: الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
43	لا تروق لي فكرة التحدي في تطوير دورات التدريب عن بعد بواسطة الإنترنت.					
44	لا أعتقد أنني سأقوم بإعطاء دورات تدريبية متقدمة بواسطة الإنترنت.					
45	أنا متأكّد أنه بإمكاني تعلم اللغة والمهارات الخاصة بالتعليم المعتمد على الحاسب الآلي .					

القسم الرابع: التعليم العالي والإنترنت في المملكة العربية السعودية

1- التعاون بين مؤسسات التعليم العالي.

التعليمات: الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
46	من السهل على عضو هيئة التدريس العمل مع مؤسسات التعليم العالي في المملكة كمتعاون.					
47	للإنترنت إمكانات كبيرة في إنشاء علاقات تعاون فاعلة بين الجامعات والكليات.					
48	يمكن أن يؤدي التعاون المشترك بين مؤسسات التعليم العالي إلى إيجاد دورات تدريب عالية الكفاءة بواسطة الإنترنت.					
49	يمكن أن تتعاون الجامعات والكليات مع المنظمات الحكومية وغيرها فيما يتعلق بتزويد موظفيهم بدورات تدريبية عن بعد عن طريق استخدم الإنترنت خلال العمل.					
50	التعاون بين أعضاء هيئة التدريس في مؤسسات التعليم العالي سوف يسهم في تحسين عملية التدريب للموظفين.					

2- إجراء تغييرات على المناهج والمقررات.

ما التغييرات التي تحتاج القيام بها من أجل جعل الإنترنت جزءًا مكملاً لأنشطة مناهج الجامعة التي تعمل بها؟

الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
51	أحتاج إلى فرص أكثر للعمل مع الزّملاء لاكتساب الكفاءة في استخدام المناهج المحسّنة بالإنترنت .					

3- مزايا وفوائد استخدام الإنترنت في التعليم والتدريب.

ما المميزات الرئيسّة للدورات التدريبية عن بعد عن طريق الإنترنت.

التعليمات: الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
52	تقدم الإنترنت فرصاً جديدة لتعليم الكبار و تدريبهم.					
53	ستساعد الإنترنت في تنمية التّعليم الذي يركز على المتدرّب .					
54	التعليم الذي يتم بمساعدة الحاسب الآلي يعد طريقة اقتصادية، وهذا يجعل التعليم والتدريب أكثر سهولة.					
55	توفر الإنترنت مرونة في الوقت والمكان في عملية التعلم.					
56	التعليم الذي يعتمد على الحاسب الآلي يقدم مصادر تعليمية غنية ومتنوعة .					
57	تحديث المهارات السريع ميزة عظيمة للتعليم عن بعد من خلال الإنترنت.					
58	التبادل السّريع للأفكار ميزة عظيمة للتّعليم عن بعد من خلال الإنترنت .					
59	عملية التدريب والتعليم عن طريق الإنترنت تعد طريقة جيدة لحل المشكلات العملية في العمل بشكل أسرع.					
60	تعد الإنترنت أداة لتعزيز التعليم التعاوني بين المتدربين أنفسهم.					

4- الصعوبات في استخدام الإنترنت في التعليم والتدريب

ما المشكلات التي واجهتك عند استخدامك للإنترنت في عملك؟

التعليمات: الرجاء وضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
61	استخدامي للإنترنت محدود غالباً بسبب نقص معرفتي التقنية في استخدامه.					
62	تكاليف استخدام الإنترنت عالية جدًّا .					
63	أحتاج إلى دورات تدريب متخصصة لأتمكن من استخدام الإنترنت بفاعلية.					

5- توقعات أعضاء هيئة التدريس حول مدى نمو هذا النوع من التعليم والتدريب في المستقبل.

من فضلك اختر إحدى الإجابات التي تبين رأيك بوضع إشارة (√) أمام الإجابة المناسبة.

التسلسل	العبارة	لا أوافق على الإطلاق	غير موافق	غير متأكد	أوافق	أوافق بشدة
64	أتوقع أن دور الجامعات والكلّيّات سيتغير بشكل كبير بسبب الاعتماد على الإنترنت في المستقبل .					
65	أعتقد أن دور أعضاء هيئة التدريس سيتغير بشكل كبير بسبب الاعتماد على الإنترنت في المستقبل .					
66	أعتقد أنني أتميز أكاديميا باستخدام التقنية الحديثة.					
67	سوف يصبح المتدربون متعلمين إيجابيين من خلال التدريب عن بعد عن طريق الإنترنت.					
68	يمكن أن تساعد الإنترنت على استيعاب مختلف أساليب التّدريب والتعليم .					
69	أنا واثق أن الجامعات والكليات في المملكة سوف تكون جاهزة لتقديم دورات وبرامج تدريبية عن بعد من خلال الإنترنت في المستقبل .					
70	أنا واثق أن أعضاء هيئة التدريس سيكونون مستعدين للتدريس في الدورات والبرامج التعليمية عن بعد عن طريق الإنترنت في المستقبل.					
71	ستكون جودة الدورات والبرامج التعليمية عن بعد بواسطة الإنترنت مماثلة للدورات والبرامج التي لا تعتمد على الإنترنت في المستقبل.					

Appendix B: The Interview Schedule (English & Arabic)

INTERIEW SCHEDULE

These interview questions have been developed to enable me to collect data for my research for my Doctoral Degree from the School of Education in the University of Durham, United Kingdom.

The research is designed to find out about the attitudes of university academic staff toward in-service training via the Internet in Saudi Arabia in order to improve the Continuous Professional Development of teachers and other public sector employees. Your opinions about these issues are very important for this study. Please note that your participation in this study is confidential. Nobody other than the researcher will look at, or use, your answers to the interview questions.

Section One: Background Information

1- personal data (age ،the main area of specialization, gender ،academic position ، experience years).

2- Do you consider your professional role to be one concerned with: teaching, research, academic administration? Do you, as part of your work attend academic and/or professional conferences, and co-operate in research and scholarship with both colleagues in other Saudi institutes of higher education and overseas?

Section Two: Internet and Higher Education in General

3- In your opinion, what is the main function of the universities in Saudi society (i.e. to gain their qualification, to train already qualified experts and technicians, in research and scholarship)?

4- Do you think that there is a clear Internet influence on the Saudi society? Do you think people and organizations in this country are developing their use of the internet as quickly as they need to?

5- What is the type of co-operation between Saudi universities and colleges? Is it easy for academic staffs to co-operate with other Saudi higher education institutions in areas such as research, course development and training?

6- What do you expect in the future, will universities and colleges in Saudi Arabia be ready to offer distance Internet-based training courses?

7- Do you believe that the role of universities and colleges as well as the role of the academic staff will be dramatically changed because of the Internet in the future?

8- Which groups in Saudi society may not benefit from Information Technology and internet-based training e.g. underachieving men, women, foreign workers and remote areas? Are there other groups that in your view are unlikely to benefit from IT?

9- How do academic staff typically see the obstacles facing the development of information technology/ internet-based training in Saudi Society and higher education? Do you talk to your colleagues about these issues? How can these obstacles be overcome?

Section Three: Use of Information Technology Training

10- Do you have a personal computer and do you have an Internet connection?

11- Do you consider yourself to be experienced in using distance Internet-based teaching methods?

12- Have you had any formal Information Technology training and have you had training in the utilization of the Internet's resources and applications? How do you keep up to date with software etc?

13- Do you believe that staff have enough time to develop their skills on personal computers and the Internet? Does the university administration encourage faculty members to attend information technology training courses?

14- Do you use the Internet for teaching, / research/ entertainment / personal interest/ Communication/ university administration?

15- Do you believe that co-operation between faculty members in higher education institutions will produce good quality Internet training courses and improve the training process for employees?

16- Is it necessary to change the curriculum to improve and incorporate new technology? Do you think academic staff need software training in order to be able to deal with new curriculum units? Are there any difficulties related to curricula that are easy to overcome by using technology e.g. marking, student access to learning materials, timing of courses?

17- What do you see as major advantages of the Internet-based training courses and what are their disadvantages?

Section four: Personal Feelings

18- How would you rate describe your enthusiasm to provide learning and training through the Internet?

19- Does working with distance Internet-based training course make you feel nervous and anxious?

20- How would you rate your confidence to provide internet-based training? When there is a problem with the Internet-based training courses that you cannot immediately solve, will you stick with it until you have the answer? Do you have adequate technical help in your Faculty to enable you to use computers to their full advantage?

Section Five: Students, Trainees and Curriculum

21- Do you agree that the use of e-Learning tools helps provide a better learning experience for trainees and creates more instructor-trainee interaction as well as interaction between trainee between trainees themselves?

22- Do you think the Internet-based training courses will help to increase the productivity of trainees?

23- Do you believe that the quality of internet-based courses will be the same as non-Internet-based courses? Will training opportunities of employees in distance Internet-based courses be the same as non-Internet-based courses in the future?

24- Is it right that there are no differences between men and women in their ability to provide help on distance Internet-based training courses?

25- Do you think that distance Internet-based teaching and learning should offer women as many opportunities as men for career development?

26- Do you think that women in the future will play as important a role as men in developing distance Internet-based teaching and learning in higher education?

27- Will the quality of internet-based courses be the same as non-Internet-based courses?

28- What is the role of technology in the learning process in general?

أسئلة المقابلة الشخصية

تعد أسئلة هذه المقابلة جزءاً من متطلبات نيل درجة الدكتوراه في التدريب والتطوير الوظيفي المستمر في كلية التربية التابعة لجامعة درم في المملكة المتحدة.

وقد صممت الدراسة للكشف عن اتجاهات أعضاء هيئة التدريس نحو التدريب أثناء الخدمة عبر الإنترنت في المملكة العربية السعودية، وذلك رفعا لكفاءة المستوى الوظيفي للمدرسين، وموظفي القطاع العام وتحسين أدائهم.

آراؤك عن هذا الموضوع مهمّة جدًّا لهذه الدّراسة. كما أن مشاركتك في هذه الدّراسة وإجاباتك على أسئلتها ستحاط بسرية تامة، ولن يطلع عليها أحد سوى الباحث.

القسم الأول :المعلومات الأساسيّة

1- معلومات شخصية (العمر ، التخصص ، الجنس، الدرجة العلمية ، سنوات الخبرة).
2- ما هي طبيعة عملك (تدريس / بحث /عمل إداري)؟ وهل سبق لك المشاركة في مؤتمرات داخليا وخارجيا أو قمت بأبحاث بالتعاون مع زملاء في الجامعات الأخرى في المملكة؟

القسم الثاني: التعليم العالي والإنترنت

3- ما هي طبيعة الدور الذي تقوم به الجامعات في المجتمع في رأيك؟ (منح شهادات ، تدريب موظفين ذوي خبرة سابقة ، القيام ببحوث ودراسات)؟

4- هل تعتقد أن هناك تأثير واضح للتكنولوجيا على المجتمع السعودي؟ وهل تعتقد أن العاملين في الشركات و المنظمات الحكومية في المملكة يعملون على تطوير أنفسهم ومنظماتهم على استخدام الانترنت بنفس سرعة احتياجهم إليها؟

5- ما هي طبيعة التعاون بين الجامعات والكليات في المملكة؟ وهل تعتقد انه من السهل لعضو هيئة التدريس المشاركة في العمل في جامعات سعودية أخرى سواء كان ذلك من خلال إجراء البحوث أو تطوير البرامج أو التّدريب؟

6- هل تتوقع أن الجامعات في المملكة ستكون مستعدة في المستقبل لتقديم برامج تدريبية عن بعد عن طريق استخدام الإنترنت؟

7- هل تعتقد أن دور الجامعات والكليات وأعضاء هيئة التدريس سوف يتغير جذريا في المستقبل بسبب دخول الإنترنت في عملية التعليم والتدريب؟

8- كيف يمكن للجماعات المختلفة في المجتمع السعودي الاستفادة من تكنولوجيا المعلومات و التدريب بواسطة الإنترنت على سبيل المثال، (الرجال غير المتعلمين والنساء غير المتعلمات بشكل كافي , العمّال الأجانب وسكان المناطق النائية)؟ وهل تعتقد أن هناك جماعات في المجتمع لن تستفيد من هذه التقنية؟

9- كيف يرى الأكاديميون العقبات التي قد تواجه نمو استخدام التعليم و التدريب عبر الإنترنت في المجتمع السعودي والتعليم الجامعي؟ وهل يتحدث الأكاديميون مع زملائهم عن هذه العقبات؟ و كيف يمكن التغلب عليها؟

<u>القسم الثالث : التدريب على كيفية استخدم تكنولوجيا المعلومات</u>

10- هل لديك جهاز حاسب آلي؟ و هل لديك اتصال مباشر بالإنترنت؟

11- هل تعتبر نفسك قادرا على التعامل مع التقنية الحديثة (الإنترنت) في التدريس عن بعد؟

12- هل تدربت على كيفية استخدام والاستفادة من الإنترنت في الحصول على المعلومات والتعرف على الطريقة الجديدة في التعليم والتدريب عن بعد؟ وكيف ترى إمكانية الاستمرار في تحديث معلوماتك فيما يتعلق ببرامج الحاسب الآلي؟

13- هل تعتقد أن لدى أعضاء هيئة التدريس الوقت الكافي للتدرب على التكنولوجيا الحديثة بواسطة أجهزتهم الشخصية لتطوير مهاراتهم؟ وهل تشجع إدارة الجامعة أعضاء هيئة التدريس على الالتحاق بمثل هذه البرامج؟

14- ما هي استخداماتك الأساسية للإنترنت (تدريس / بحث عن معلومات/ اتصال / ترفيه/إدارة الجامعة)؟

15- هل تعتقد أن التعاون بين أعضاء هيئة التدريس في الجامعات سيقود إلى أيجاد دورات تدريبية عالية الكفاءة ستحسن من عملية تدريب الموظفين؟

16- هل تعتقد أنه بالضرورة تغيير المناهج من خلال إدخال التقنية الحديثة؟ وهل تعتقد كعضو هيئة التدريس انك بحاجة إلى دورات تدريبية لكيفية التعامل مع هذه المناهج؟ وهل هناك مشكلات مرتبطة بالمناهج يمكن التغلب عليها باستخدام التكنولوجيا، على سبيل المثال (كيفية تصحيح إجابات المتدربين ، حصول المتدرب على المادة العلمية ، توقيت بدء البرامج)؟

17- ما هي المزايا الرئيسة لاستخدام الإنترنت في التدريب عن بعد وما هي مساوئ ذلك؟

القسم الرابع: ماذا عن شعور عضو هيئة التدريس؟

18- إلى أي مستوى تصف حماسك للقيام بالتدريس والتدريب عن بعد باستخدام الإنترنت؟

19- هل تشعر بقلق عندما تقوم بالتدريب عن الطريق الإنترنت؟

20- ما مدى شعورك بالثقة عند القيام بالتدريب عن طريق الإنترنت؟ وفيما إذا واجهتك مشكلة عند استخدامك لهذا النوع من التعليم هل ستواصل المحاولة إلي أن تصل إلى حل لها؟ وهل تحصل على مساعدة تقنية كافية تمكنك من استخدام مزايا التقنية الحديثة بشكل كامل؟

القسم الخامس: الطلاب والمتدربين والمناهج

21- هل ستساهم أدوات التعليم الإلكتروني في تحسين عملية التدريب وتزويد المتدرب بخبرات تعليمية افضل وزيادة الفاعلية بين المدرب والمتدرب وبين المتدربين أنفسهم؟

22- ما مدى مساهمة استخدام أسلوب التدريب عن بعد في تحسين وزيادة الإنتاجية للمتدربين؟ وهل سيفيد هذا الأسلوب من التدريب جميع التخصصات؟

23- هل تعتقد أن جودة دورات التدريب عن طريق الإنترنت ستكون كبرامج التدريب التقليدية؟ وهل ستكون فرص التدريب عن طريق الإنترنت للموظفين مساوية لفرصهم في التدريب التقليدي في المستقبل؟ وهل يعزز هذا التدريب عن بعد النقص الحاصل في التدريب التقليدي؟

24- هل هناك فرق في القدرات بين النساء والرجال في التدريب عن طريق الإنترنت؟

25- هل تعتقد أن دورات التدريب عن طريق الإنترنت يجب أن توفر فرص متكافئة للنساء كتلك التي للرجال فيما يختص بالتطوير الوظيفي؟

26- هل تعتقد أن المرأة ستلعب دوراً رئيسا في المستقبل كدور الرجل في تطوير التعليم و التدريب عن طريق الإنترنت؟

27- هل ستكون الدورات التدريبية عن طريق الإنترنت مماثلة للدورات التقليدية؟

28- ما هو دور التقنية الحديثة في العملية التعليمية بشكل عام؟

Appendix C: Letter from Saudi Arabia Cultural Bureau in United Kingdom to Saudi universities and colleges requesting permission to distribute the questionnaires and apply interviews

Royal Embassy of Saudi Arabia
Cultural Bureau
London / UK

المملكة العربية السعودية
وزارة التعليم العالي
مكتب الملحق الثقافي في بريطانيا

الأكاديمية

رقم الملف : B 112

إفـــــادة

يفيد المكتب الثقافي في بريطانيا بأن السيد / عبدالمحسن بن عبدالرزاق الغديان مبتعث من جامعـــة الامام محمد بن بن سعود الاسلامية للحصول على درجة الدكتوراه من جامعة درم بالمملكة المتحدة في تخصص " أصول التربية "، وهو الآن يقوم برحلة علمية للمملكة لجمع معلومات تتعلق ببحثـــه ودراسته للدكتوراه، نأمل تسهيل مهمته.

وقد أعطيت له هذه الافادة بناءً على طلبه.

والله الموفـــق ،،،

الملحق الثقافي في بريطانيا

عبدالله بن محمد الناصر

ب ر / ح ي

NO. ٤/٣٢٢٦ DATE: ١٤٢٤/٧/٦ ENC. ٣
29 BELGRAVE SQUARE LONDON SW1X 8QB · Telephone 0207 [illegible]

Appendix D: Transcribing of Interviews into Arabic
(For example)

بسم الله الرحمن الرحيم والصلاة و السلام على رسول الله سيدنا محمد وعلى صحبه ومن والاه ..

في البداية حبذا يا دكتور تقدم بعض المعلومات الشخصية عن نفسك فيما يتعلق بالعمر و التخصص و الدرجة العلمية وسنوات الخبرة .

بسم الله الرحمن الرحيم ..العمر 45 سنة الشهادات العلمية دكتوراه من جامعة ساوث هامبتون في بريطانيا في عام 1989 تخصص جغرافيا زراعية واعمل الآن في زهاء سنتين وكيل لكلية الدراسات العليا .

- ما هي طبيعة عملك الآن في الجامعة هل هو تدريس ..؟

نعم أنا الآن اجمع بين التدريس و العمل الإداري و الإشراف أيضا على الطلاب و الطالبات من داخل وخارج الجامعة .

_ وفيما يتعلق بالبحوث هل تقوم بإجراء بعض البحوث ..؟

في الفترة الحالية تقريبا شبه متوقف لانشغالي بمجموعة من الطلاب الذين في مراحلهم النهائية بالنسبة للرسائل و لكن الحمد لله أنجزت العديد من البحوث و ترقيت اكثر من سنتين إلى درجة أستاذ مشارك .

- المؤتمرات الداخلية و الخارجية هل سبق لك المشاركة ..؟

شاركت في العديد من المؤتمرات و الندوات داخل المملكة سواء فيما يتعلق بمشاركات علمية أو مشاركات تنظيمية خاصة المؤتمرات التي تنظمها وزارة التعليم العالي أو تنظمها الجامعة .مشاركتي بالنسبة للندوات و المؤتمرات خارج المملكة قليلة .شاركت في ندوة أو ندوتين في بريطانيا .

- فيما يتعلق بالبحوث هل قمت ببحوث و إجراء دراسات مع زملاء آخرين في جامعات أخرى في المملكة ..؟

نعم من ابرز الأعمال التي شاركت فيها .شاركت في الموسوعة الجغرافية لدول العالم الإسلامي الأقليات المسلمة التي أصدرتها كمادة البحث العلمي في الجامعة .شاركت أيضا في كتاب موسوعي عن منطقة الرياض تقريبا في ثمان مجلدات بمناسبة الاحتفال أيضا بمرور مائة عام كوني أحد أعضاء هيئة التحرير و في نفس الوقت أيضا كان لي بحثين في هذه الموسوعة .كذلك عملت في فريق كبير عن الثقافة التقليدية في المملكة العربية السعودية وكنت متراس أحد المحاور المتعلقة بالزراعة التقليدية .

- طبيعة الدور الذي تقوم به الجامعات في المجتمع السعودي في رأيك هل هو منح شهادات أو تدريب موظفين أو القيام ببحوث ودراسات ..؟

دون شك الجامعة يعني كما هو مفترض لها أنشطة متعددة منها مثلا الدور الأساسي الذي تقوم به وهو تدريس الطلاب الجامعيين أيضا من اهتماماتها الرئيسية الدراسات العليا كما

تعرفون الجامعات السعودية جميعها تقريبا تقدم هذه الخدمة سواء على المستوى دبلوم أو مستوى ماجستير أو مستوى الدكتوراه و تعرفون أن هناك لائحة موحدة صدرت من خمس سنوات تنظم الدراسات العليا في الجامعات السعودية كافة .طبعا أمور البحث العلمي لاشك أنها من الاهتمامات الرئيسة للجامعات كافة وكثير من جامعات المملكة تخصص أما عمادات مستقلة أو مراكز بحوث للاهتمام بهذا الجانب المهم من أنشطة الجامعة . أيضا المحور الرابع وهو طبعا خدمة المجتمع بدون شك أيضا لكل الجامعات جهود كبيرة في هذا المجال مثلا تخصيص وكالة في الجامعة لخدمة المجتمع كما هو الحال لجامعتنا و لعلها الجامعة الوحيدة التي خصصت اهتمام كبير على هذا المستوى على مستوى وكالة جامعة لخدمة المجتمع ,وتوسعت الجامعة في السنين الأخيرة في تقديم هذه الخدمة بعقد ليس فقط الندوات و غيرها لكن أيضا في تقديم كم كبير من الدبلومات في جوانب متعددة من الجوانب التي يحتاجها المجتمع .أيضا كما تعرفون قبل سنتين أو ثلاث أنشئت العديد من الكليات كلية خدمة المجتمع في العديد من المناطق خاصة المناطق التي ليس فيها جامعات أو فروع للجامعات .

- هل تعتقد أن هناك تأثير واضح للتكنولوجيا على المجتمع السعودي..؟

يبدوا أن سؤالك موجه نحو تقنية المعلومات بصورة اكبر .بدون شك هذه يعني تقنية أخذت تغزو العالم بشكل متسارع و بدون شك تعتبر ألان من المؤشرات المهمة التي تدل على تقدم الأمم وتمكنها لان تقنية المعلومات أصبحت من الأساسيات التي تعتمد عليها الدول في قضايا التنمية .ولا شك طبعا أنها مهمة جدا ومن أول الجهات التي يجب أن تهتم بهذه القضية هي الجامعات بدون شك و في المملكة يلاحظ انتشار استخدام الإنترنت واستخدام أيضا و انتشار حتى المراكز التدريبية سوء كانت حكومية أو أهلية لتقديم هذه الخدمة التدريبية على الحاسب الآلي بما في ذلك تقنية المعلومات و الإنترنت .لاشك يدرك مدى توجه المجتمع نحو هذه التقنية و هذا إنشاء الله أمر يبشر بالخير.

- بالنسبة للعاملين الموظفين في الشركات والمنظمات الحكومية في المملكة ، هل تعتقد انهم يعملون على تطوير أنفسهم ومنظماتهم على استخدام الانترنيت بنفس السرعة التي يحتاجون بها إلى الانترنيت. ؟

لا أستطيع أن أعطي إجابة صحيحة جازمة ، لهذا الموضوع ولكن اعتقد أننا ما زلنا قياسا بالأمم الأخرى بحاجة إلى المزيد. صحيح أن كثيرا من الشركات بل والمؤسسات الحكومية التي أيضا هي في الغالب اقل سرعة في اتخاذ مثل هذه القرارات ، صحيح أن هناك تقدم كبير خلال السنوات الأخيرة ولكن اعتقد انه مقارنة بالدول الأخرى ما زلنا بحاجة إلى تسريع اهتمامنا بالتقنيات الحديثة خاصة تقنية المعلومات .

- بحكم موقعك كوكيل كلية ، ما هي طبيعة التعاون بين الجامعات و كليات المملكة ؟ هل هناك تعاون ؟

بدون شك من المفترض أن يكون هناك تعاون على مستويات مختلفة على مستويات تبادل أعضاء هيئة التدريس . الاشتراك في مشاريع بحثية وعلمية إلى غير ذلك من المجالات . ولكن أنا اعتقد انه بالنسبة لجامعاتنا في المملكة ما زلنا مقصرين كثيرا في قضية التعاون على مختلف الجوانب. نعم لدينا تبادل لأعضاء هيئة التدريس . مشاركات في مناقشة الرسائل مثلا العلمية ، الاشتراك في بعض الندوات والبحوث ، أحيانا ولكنها اعتقد ما زالت اقل من المفترض بكثير.

- هل من السهل لعضو هيئة التدريس المشاركة في العمل في جامعات سعودية أخرى؟

ليست هناك عوائق تنظيمية أو نظامية تحول دون ذلك ، فالمجال مفتوح واعتقد أن التقصير من أعضاء هيئة التدريس أنفسهم وليس من الأنظمة . فالأنظمة تحث على التعاون سواء في قضايا التدريس أو قضايا الاشتراك في المشاريع العلمية أو في مناقشة الرسائل أو حتى الإشراف عليها ونحن مثلا على سبيل المثال في الكلية لدينا جهود طيبة والحمد لله في التعاون مع جهات أخرى سواء مع الجامعات أو مع الكليات ، كليات البنات في قضايا الإشراف وقضايا التدريس والمناقشات وغيرها.

- هل تعتقد أن الجامعات في المملكة سوف تكون مستعدة في المستقبل ، لتقديم برامج تدريبية عن بعد عن طريق استخدام الانترنيت؟

أنا اعتقد نعم ، لا بد من أن تكون مستعدة لتقديم هذه الخدمة وإلا أصبحت متخلفة عن اللحوق في ركب الجامعات الأخرى . الجامعة التي لا تطور نفسها وتأخذ بآخر ما توصل إليه العلم وما توصلت إليه التقنية الحديثة لا شك سيؤثر ذلك على وزنها العلمي ونظرة الناس إليها وتقديرهم لها.

- دور الجامعات وأعضاء هيئة التدريس ، هل تعتقد أنها سوف تتغير مع دخول الانترنت في عمليات التدريس والتعليم والتدريب؟

نعم اعتقد ذلك. اعتقد أن هذه الخدمة يمكن أن تفتح مجالا أوسع لعمليات التدريس وتقدم أدوات جديدة لعمل الجامعات وتسهل تقديم الخدمة لأناس آخرين خاصة فيما يتعلق بالقطاع النسائي حتى بدون المجيء إلى الجامعة والتكلف بل حتى إذا كانوا في مدن أخرى ، فلا شك أنها هي تقنية عالية ومهمة ويمكن أن ترفع كثيرا من خدمات الجامعات لمن يطلب خدماتها.

- من المعلوم أن المجتمع يتكون من جماعات مختلفة عندنا على سبيل المثال الرجال غير متعلمين والنساء كذلك غير متعلمات بشكل كافي والعمال الأجانب وسكان المناطق النائية. كيف ترى أن مثل هذه الجماعات في المجتمع أن تستفيد من تكنولوجيا المعلومات والتدريب؟

طبعا المجتمع مثل ما تعرف يتكون من شرائح متعددة ومختلفة إذا أخذته من مقياس التعليم فلا شك أن الشريحة التي ذكرتها قد لا يكون من المتيسر استفادتها من تقنية المعلومات ، فتقنية المعلومات تحتاج إلى مستوى علمي معين أحيانا قد تحتاج أيضا إلى معرفة ولو بسيطة باللغات الأجنبية على أساس انك تستفيد بمعنى استفادة اكبر ولذلك اعتقد أن هذه الشريحة قد لا يكون بمقدورها الاستفادة المباشرة من هذه التقنيات.

- يعني تعتبر أن هذه الجماعات في المجتمع لن تستفيد بشكل كبير؟

بشكل مباشر قد لا تستفيد ، لكن طبعا الاستفادة غير مباشرة لأنها تنقل ما يوجد داخل هذه الشبكة العنكبوتية ، لا شك أن باستطاعة الآخرين أن ينقلوه إلى الناس الآخرين حتى ولو لم يكونوا متعلمين . هذه استفادة غير مباشرة لكن ما اقصده هو الاستفادة المباشرة فلا شك أن التعليم واحد من الأشياء المهمة التي تجعل من الفرد أو من الشريحة الاجتماعية قادرة على الاستفادة من هذه التقنيات. أما من شان المناطق النائية فلا اعتقد انه بالنسبة للمملكة هناك مناطق نائية . تقنية الانترنيت يمكن أن تصل إلى أي مكان مثلما تعرف الخدمات الهاتفية والحمد لله متوفرة الآن في اصغر القرى في أرجاء المملكة وبالتالي لا اعتقد أن البعد أو المنطقة ستحول دون الاستفادة بل أن هناك في الوقت الحاضر أناس كثيرون في أقصى القرى يستفيدون من هذه التقنية الحديثة.

- كيف يرى الأكاديميون العقبات التي قد تواجه استخدام الإنترنت في التعليم والتدريب ؟

اعتقد انه ليس هناك عوائق كبيرة ، ربما التجهيزات الأساسية والبنية التحتية من الأشياء المهمة في توفير هذه الخدمة . قضايا التدريب لا شك مهمة . تدريب المدربين وتدريب من يقدمون الخدمة للآخرين لا شك أمر مهم على أساس أن يقدمونها بصورة متكاملة وبصورة افضل. كثير من الناس الآن يعرف بقدر أو بآخر عن هذه التقنية ولكن طبعا التمكن منها وتقديمها وتدريب الناس عليها لا شك يحتاج إلى قدرات لن تستطيع بواسطتها التدريب ونحوه. فلو كان هناك طبعا دورات تدريبية تقدم مثلا لأساتذة الجامعات ، لطلاب الجامعات ونحن هنا والحمد لله في الكلية قسم الحاسب الآلي يقدم هذه الخدمات حتى بالنسبة للطلاب العاديين يعطيهم دورات مختلفة في الحاسب الآلي وفي الشبكات وفي الانترنيت وفي نموها. وأيضا عمادة التعليم المستمر تقدم دورات متنوعة في هذا المجال.

- هل يتحدث الأكاديميون مع زملائهم حول هذه العقبات؟

ربما محور الحديث عن كيفية الاستفادة من هذه الأشياء يعني مثلا في تبادل المواقع المهمة خاصة المتعلقة بالتخصصات الدقيقة بعض الأساتذة لديهم مجموعات ربما يتبادلون معهم المعلومات بواسطة البريد الإلكتروني . لا شك أنها أشياء بدأت تظهر في السنوات الأخيرة.

- أنت ذكرت بعض العوائق مثل البنية التحتية مثلا الاتصالات وأيضا عمليات التدريب لأعضاء هيئات التدريس ، كيف يمكن التغلب على مثل هذه العوائق؟

اعتقد بالنسبة للأشياء المادية لا بد من توفير المخصصات المالية. لكن لا تكون المعوقات قاصرة على ذلك. أحيانا بعض النظم و بعض التنظيمات هي تحتاج إلى مواكبة هذه التقنية لتحديثها وجعلها ممكنة . فمثلا قضية التدريس عن بعد يجب أن يؤخذ فيها قرارات وأنظمة وتقنن وتكون ممكنة. الآن مثلا نحن ندرس الطلاب والطالبات في الدراسات العليا أتوا من أقصى المملكة إلى الرياض . لماذا لا تقدم هذه الخدمة لهم وهم في مناطقهم؟ مهنيا ممكنة ، تقنيا ممكنة ولكنها تحتاج إلى نوع من التنظيم الذي يصنع أطرها ويحدد اتجاهاتها.

- هل لديك جهاز حاسب آلي في المنزل أو في العمل؟

نعم لدى جهاز حاسب آلي في المنزل وفي المكتب .

- وهل هناك اتصال مباشر بالانترنيت؟

نعم.

- هل تعتبر نفسك قادر على التعامل مع هذه التقنية في التدريس عن بعد؟

أنا لست محترفا . أنا اعتبر نفسي من متوسطي الخبرة فيما يتعلق بالانترنيت لا أستطيع بمعلوماتي الحالية اقدم هذه الخدمة لمن يريدها بالشكل المتكامل . صحيح أنني ممكن أقدمها على حسب معرفتي ولكنني بدون شك اطمح إلى المزيد وإذا كنت أريد أن اقدم هذه الخدمة سأبحث عن برنامج تدريبي قبل أن اقدم على ذلك.

- هل تدربت على كيفية استخدام والاستفادة من الانترنيت للحصول على المعلومات والتعرف على الطريقة الجديدة في التعليم عن بعد؟

أنا طبعا لم ادخل أي دورة تدريبية ولم يكن الحاسب الآلي من ضمن المواد التي درستها في أي مرحلة من مراحل دراستي لكنها اجتهادات أقرا يعني بعض المنشورات وبعض الكتب استفيد من خبرة الزملاء والأصدقاء الذين سبقوني في هذا المجال حتى تكونت لي قاعدة لا باس بها في التعامل مع الحاسب الآلي بشكل عام ومع تقنية المعلومات.

- كيف ترى استمرارك في تحديث معلوماتك فيما يتعلق ببرامج الحاسب الآلي؟

وقتي خاصة خلال السنتين الأخيرتين بعد أن توليت مسؤولية وكالة الكلية ضيق جدا، ولكنني دائما ما اخصص كل يوم أو يومين ساعة أو ساعتين للاستفادة من الحاسوب ومن أيضا الدخول على الشبكة العنكبوتية والتصفح في الموقع الإلكتروني والرد على بعض الرسائل وهكذا ، وطبعا لا زلت على اتصال .

- هل تعتقد أن لدى أعضاء هيئة التدريس الوقت الكافي للتدريب على التكنولوجيا الحديثة؟

نعم اعتقد أن الأمر ميسر خاصة أن البرامج التدريبية أصبحت تقدم على مدار الساعة غير مخصصة في الصباح أو المساء يعني معظم الذين يقدمون الخدمة ابتداء من الساعة السابعة صباحا أو السابعة والنصف حتى الساعة العاشرة أو الحادية عشرة ليلا .فبإمكان الشخص مثلا أن يختار الفترة التي تناسبه فاعتقد انه ليس لأي عضو عذر في تطوير نفسه في هذا المجال.

- هل تشجع إدارة الجامعة أعضاء هيئة التدريس في الالتحاق بمثل هذه البرامج التدريبية؟

لا اعرف شيء محدد بالنسبة لهذا الموضوع ولكن اعتقد انه من يتقدم لهذه الجامعة طلبا لمثل هذه الدورات اعتقد انو سيلقى التشجيع لان الجامعة دائما تبحث عن الأفضل سواء من أعضاء هيئة التدريس أو الموظفين.

- ما هي استخداماتك الأساسية للانترنيت ؟ هل هي تدريس أو للبحث عن معلومة؟

أنا لم استخدم الانترنيت في التدريس بعد ، لكن استخدمه في جوانب متعددة استخدمه في الترفيه أحيانا أطالع بعض الصحف العالمية للأخبار واستخدمه في البحث العلمي أمر مهم . في البريد الإلكتروني أيضا التواصل مع الأصدقاء والزملاء والمتخصصين.

- بالنسبة للأعمال الإدارية؟

قليل استخدمي له.

- هل تعتقد أن التعاون بين أعضاء هيئة التدريس في الجامعات سيقود إلى إيجاد دورات تدريبية عالية الكفاءة ستحسن من عملية تدريب موظفي الدولة ؟

أنا اعتقد أن الأمر قد لا يكون متعلق بالدورات ، قد لا تكون متعلقة بأعضاء هيئة التدريس أنفسهم ، هي متعلقة بالأجهزة الإدارية في الجامعات . لكن بدون شك أن أمر التعاون أمر جيد في كل المجالات .

- من المعلوم أن برامج التدريب التي تقدم عن طريق الانترنيت يتم أعدادها من قبل فريق متكامل سواء كانوا تقنيين في الجامعات أو بتخصصات مختلفة ، بينما مثلا البرامج التقليدية نجد أن الذي يعدها عضو هيئة تدريس واحد. هل هي ستكون أعلى من كفاءة وجودة البرامج التدريبية التقليدية؟

بدون شك طبعا عندما يشترك الأكاديميون قد لا يكونون وحدهم ، قد يكونون أعضاء في فريق متكامل من الفنيين والمتخصصين في البرمجيات وفي الحاسب الآلي يمكنهم بدون شك سيغطون جوانب قد لا يستطيع غيرهم أن يقوم بها.

- هل تعتقد بالضرورة تغيير المناهج عند تطبيق التدريب عن بعد باستخدام الانترنيت؟

نعم اعتقد انه ضروري على الأقل بعض المناهج تحتاج إلى تطوير ومواكبة هذه التقنية فبدون شك الإسراع في تحويلها إلى خدمة هذه الاتجاهات الحديثة دون شك أمر مهم.

- فيما يتعلق بالمحتوى ، هل يحتاج إلى تغيير أيضا؟

قد لا يكون المحتوى بحد ذاته ولكنه يحتاج إلى إعادة صياغة على أساس المواكبة.

- هل تعتقد أن عضو هيئة التدريس بحاجة إلى دورات تدريبية لكيفية التعامل مع هذه المناهج ؟

اعتقد نعم. اعتقد انه الآن ربما نقول نسبة كبيرة من أعضاء هيئة التدريس في الجامعات لديهم معرفة لدرجة أو بأخرى بالإنترنت وتقنياته ولكن إذا تريد تستخدم هذه التقنية استخداما متكاملا في التدريس والتواصل مع الآخرين اعتقد انك بحاجة إلى دورات متخصصة .

- هل تتوقع أيضا أن هناك مشكلات مرتبطة بالمناهج يمكن التغلب عليها؟

نعم أنا اعتقد انه بدون شك المناهج قد يكون فيها مشكلات ولذلك بعض المناهج تحتاج إلى تطوير و إعادة صياغة لتواكب التقنيات الحديثة ومع استخدام الانترنيت.

- في رأيك ما هي المزايا الرئيسية في استخدام الانترنيت؟

الإنترنت بدون شك تفتح آفاقا واسعة جدا سواء في التراكم المعرفي والحصول على معلومات جديدة وحديثة أو أيضا في التعليم عن بعد وهو محور مهم لأنك يمكن أن تقدم لطالبي الخدمة هذه الخدمة بأي مكان ليس شرط تجميعهم في مكان واحد . هذه ربما أهم الأشياء.

- وبالنسبة للمساوئ ، هل تعتقد أن هناك مساوئ ؟

قد يكون الانعزالية أو شبه الانعزالية إذا ما أريد تدريس الطلاب عن بعد عدم وجود تفاعل بين المجموعة اقصد وإلا هناك تفاعل بين من يقدم الخدمة وبين من يتلقاها . لكن خصائص الدراسات الجامعية خاصة الدراسات العليا هو النقاش بين ا لزملاء داخل القاعة وتلاقح الأفكار .

– إلى أي مستوى تصف حماسك للقيام بالتدريس والتدريب عن طريق استخدام الانترنيت؟

نعم بدون شك أنا متحمس ومن الناس الذين يسعون إلى تطوير أنفسهم واعتقد أن استخدام هذه التقنية بدون شك اتجاه حديث وجديد ومشوق لكل من المحاضر والمتلقي ويمكن تقديم الخدمة على نطاق واسع.

– هل تعتقد انك ستشعر بالقلق عندما تقوم بالتدريس عن طريق استخدام الانترنيت؟

لا اعتقد . متى ما حصلت على التدريب الكافي لن اشعر بالقلق.

- ما مدى شعورك بالثقة عند القيام بالتدريب عن طريق الانترنيت؟

اعتقد أنني متى ما تلقيت التدريب الجيد يعني خبرتي كبيرة في قضية التدريس يمكن حوالي 23 أو 24 سنة . لا اعتقد إنني سألاقي أي صعوبة فيما يتعلق بقضايا الثقة. وأنا من الناس الذين عادة يحضرون الأشياء قبل الإقدام عليها حتى فيما يتعلق بالمحاضرات رغم أني أحيانا ادرس المقرر لعدة سنوات لكنني أقوم بتحضيره في كل مرة ومحاولة الحصول على آخر ما توصل إليه التخصص.

- إذا واجهتك مشكلة وأنت تقوم بالتدريس عن طريق الإنترنت هل تواصل المحاولة إلى إيجاد حل لها ..؟

نعم إذا كان بمقدوري طبعا أنا من الناس الذين يحبون أن يعُدوا أنفسهم قبل أن يقدمون على الأشياء .لكن عندما أبدا هذه الخطوة ، خطوة التدريس عن بعد باستخدام الانترنيت ، قد أكون قادرا على حل معظم المشكلات التي تواجهني .

- هل تحصل على مساعدة تقنية كافية من داخل الجامعة تمكنك من استخدام مزايا الانترنيت بشكل كامل؟

الزملاء المسؤولون عن تقديم هذه الخدمة بكلية الحاسب الآلي لا شك انهم يبذلون جهودا طيبة في حل أي مشكلة ولكنني اعتقد أن الخدمة لا زالت جديدة بالنسبة للجامعة وهم يحاولون بقدر المستطاع المساعدة .

- هل ستساهم أدوات التعليم الإلكتروني الايميل والمؤتمرات المرئية والمسموعة في تحسين عملية التدريب وتزويد المتدربين بخبرات تعليمية افضل؟

نعم اعتقد انه هذه التقنيات الجديدة بدون شك ستطور المتدربين بأنهم سيحاولون بأنفسهم الاستفادة من هذه التقنية بإمكانياتها الضخمة .

- وفيما يتعلق بالتفاعل بين المدرب والمتدرب وبين المتدربين أنفسهم.؟

التفاعل قد تحكمه نوعية الشبكة المتعلقة . فإذا كان مثل شبكة المؤتمرات هي عبارة عن اتصال مجموعة من المتلقين وتبادل الأحاديث فيما بينهم. قد لا يكون هناك أي سلبيات فيما يتعلق بالاتصال والتفاعل بحيث يجمعون بين إيجابيات الوجود في مكان واحد وبين إيجابيات الاستفادة من هذه التقنية بميزاتها الضخمة.

- ما مدى مساهمة استخدام أسلوب التدريب عن بعد في تحسين وزيادة الإنتاجية للمتدربين إذا كانوا على راس العمل؟

نعم بدون شك أن المتدربين عندما يتلقون تدريبا جيدا ويبدءون يطبقون هذه التقنية بدون شك سيكون هناك كثير من الإيجابيات في رفع الإنتاجية.

- هل تعتقد في نظرك أن هذا الأسلوب سيفيد جميع التخصصات؟

قد يكون هناك اختلاف بين التخصصات المختلفة ولكن اعتقد أن كل التخصصات يمكن تستفيد من هذه التقنية بدون استثناء ، قد تختلف نسبة الاستفادة .

- هل جودة دورات التدريب عن طريق الانترنيت ستكون كبرامج التدريب التقليدي؟

من ناحية الجودة ، اعتقد أنها إذا أعدت إعدادا جيدا واشترك فيها فريق متكامل من الفنيين والمتخصصين بالبرمجيات ومن أعضاء هيئة التدريس أيضا لتوجيه هذه الدورات يرجى أن تكون افضل بكثير من البرامج التقليدية.

- هل ستكون فرص التدريب عن طريق الانترنيت للموظفين مساوية لفرصهم في للتدريب التقليدي في المستقبل؟

والله من المفترض أن تكون مساوية أو اكثر واعتقد انه متى ما وجد هناك تجهيزات كافية تقدم الخدمة بالتدريب عن طريق الإنترنت يمكن يكون اسهل على أساس تقديمها لأناس في أماكن مختلفة في وقت واحد .

-هل تعتقد أن هذا النوع من التدريب سيعزز النقص الحاصل في التدريب التقليدي ..؟

نعم اعتقد انه ممكن أن يسرع برامج التدريب لأنه ممكن أن يقدم الخدمة لأناس موجودين في أماكن متعددة ومختلفة في نفس الوقت دون أن يؤثر ذلك على أعمالهم أن يخصص لهم وقت معين مساء مثلا لمدة ساعتين أو ثلاث ساعات خارج وقت الدوام ويقدم حتى في أماكن مختلفة ولذلك أنا اعتقد انه يمكن يكون التدريب عن بعد يسد العجز الحاصل في البرامج التقليدية و أيضا يقدم الخدمة لأعداد اكبر من الموظفين .

- هل هناك فرق في القدرات بين النساء و الرجال في التدريب عن طريق الإنترنت على انهم مدربين وليسو متدربين ..؟

ما اعتقد انه سيكون هنالك فرق بين الجنسين متى ما لقوا نفس العناية ونفس التدريب لا اعتقد أن هناك فرق .

- فيما يتعلق بالمدربين و المتدربين هل تعتقد أن دورات التدريب عن طريق الإنترنت يجب أن توفر فرص متكافئة للنساء كتلك للرجال فيما يختصص بالتطوير الوظيفي ..؟

والله من الصعب انك تأخذ الشيء طبعا المفترض في برامج التدريب أن تقدم حسب نسبة طلبيها نحن نعرف أن لدينا نسبة الرجال من العاملين أضعاف النساء فقضية أنها تكون متساوية لا اعتقد أنها ستكون متساوية .ولكن المفترض أنها تقدم خدمة لمن يريدها أو يحتاجها سوا كان رجال أو نساء .

- هل تعتقد أن المرأة ستلعب دور رئيس في المستقبل كدور الرجل في تطوير التعليم و التدريب عن طريق الإنترنت ..؟

المرأة نصف المجتمع و بدون شك أنا اعتقد . ونحن الحمد لله مجتمع محافظ يحرص على التقيد بتعاليم الشريعة الإسلامية وعدم وجود مثلا برامج مشتركة بين الرجال و النساء .قد يكون طبعا تقديم خدمة التدريب عن طريق الإنترنت من الأشياء التي تناسبها ربما اكثر حتى من أي مجتمع أخر فمثلا يمكن أن تقدم الخدمة للنساء في منازلهم أو في أماكن عملهن بكل

سهولة دون التعرض إلى هذه الإشكاليات الشرعية .أما فيما يتعلق بنص السؤال أنا اعتقد انه ليس هناك فرق جوهري بين الرجل و المرأة يمكن أن يقدمه التدريب لمن يريده النساء للنساء مثلا و الرجال بنفس الفترات .

- هل ستكون الدورات التدريبية عن طريق الإنترنت مماثلة للدورات التقليدية ..؟

لا اعتقد الدورات التدريبية عبر الإنترنت تحتاج إلى تنفيذات و إعداد برامج بشكل افضل و ممكن لو اعد لها و وضعت بشكل جيد ربما يكون تنفيذها اسهل في الدور التعليمي .

- ما هو دور التقنية الحديثة في العملية التعليمية بشكل عام من وجهة نظرك ..؟

التقنية الحديثة متعددة الأوجه هذا وجه من أوجهها استخدام الإنترنت في التعليم هذا واحد من الأوجه لان هناك تقنيات متعددة و كثيرة من التقنيات التي ممكن أن تستخدم في العملية التعليمية ولا شك طبعا أن استخدام التقنية الحديثة في التعليم من الأشياء التي يجب أن تحرص عليها أي أمة تتطلع إلى المستقبل و من ناحية طبعا الدول المتقدمة تولي أهمية كبيرة في التقنيات المختلفة و تولي أهمية كبيرة وتجعله من أولى القطاعات التي يستفيد من هذه التقنيات ..

Appendix E: Interview Coding Form (English & Arabic)

In the Name of Allah, the merciful and the most beneficent

Interview Coding Form

Section One: Personal Data:

1. Sex

a. Male ☐ b. Female ☐

2. Age:

a. 20-30 years ☐ b. 31-40 years ☐

c. 41-50 years ☐ d. over 50 years ☐

3. Specialization:

a. Arts ☐

b. Science ☐

4. Academic Rank:

a. Assistant lecturer ☐

b. Associate lecturer ☐

c. Lecturer ☐

5. Years of Experience:

a. 1-5 years ☐

b. 6-10 years ☐

c. 11-15 years ☐

d. Over 15 years. ☐

6. What is the nature of your current job? (You may choose more than one answer).

6-1) Teaching. ☐

6-2) Research. ☐

6-3) Community service ☐

6-4) Patients care ☐

6-5) Administrative university work ☐

6-6) Other types of jobs. ☐

7- Have you had any participation in internal or external conferences?

7-1) Participation in internal conferences:

a) Yes ☐ b) No. ☐

7-2) Participation in external conferences:

a) Yes ☐ b) No. ☐

8- Have you done any researches in cooperation with other members of universities in the kingdom?

a) Yes ☐ b) No. ☐

Section Two: Higher Education and the Internet

9- What is the nature of the role played by universities towards societies in your opinion?

9-1) Teaching. ☐

9-2) Community service (personnel training) ☐

9-3) Conduct research and studies. ☐

10- Do you think there is a notable effect of modern technology on the Saudi society?

a) Yes ☐

b) Not Sure ☐

c) No. ☐

11- Do you think employees (males & females) in government organizations in Saudi Arabia, try to develop themselves and their organizations in the area of Internet use with the same speed of their need to that service?

a) Yes ☐

b) Not sure ☐

c) No. ☐

12- In your opinion, what is the nature of cooperation between the universities and colleges in the Kingdom of Saudi Arabia?

12-1) There is big scale cooperation ☐

21-2) There is a medium cooperation ☐

12-3) There is little cooperation ☐

12-4) There is no cooperation ☐

13- Do you think it is easy for a member of the academic staff to participate in the work of other Saudi universities, whether to conduct researches, develop programs or training?

13-1) It is easy for him to move in an official way. ☐

13-2) It is easy for him to move in a personal way. ☐

13-3) It is difficult for him to move. ☐

14- Do expect that universities in Saudi Arabia will be ready in future to provide distance-training programs via the Internet?

14-1) They are ready now. ☐

14-2) Will be ready in future. ☐

14-3) Some universities are ready now. ☐

14-4) Some universities will be ready in future. ☐

14-5) They will not be ready in future. ☐

14-6) I do not know. ☐

15- Do you think the role played by universities; colleges and academic staff will change drastically in future because of the introduction of the Internet in the process of learning and training?

a) Drastic change ☐

b) There will be some changes ☐

c) No change will be witnessed ☐

d) Some other roles will be added to universities ☐

e) I have no idea. ☐

16- How is it possible for the different groups in the Saudi society to benefit form the information technology and training via the Internet? For example, (males and females who have no adequate education, expatriate labor force and Saudi public residing in remote areas? (It is possible to choose more than one answer).

16-1) Provide training via the Internet for all members of the Saudi society and raise their educational standard. ☐

16-2) Enlighten society members with the importance of distance learning and training. ☐

16-3) Decision makers interest in the introduction of modern technology in the learning and training process and in enforcing that on the public. ☐

16-4) The duty and mission of universities in serving all society members. ☐

16-5) By other means. ☐

17- Do you think that there are sectors or groups in the Saudi society that will not benefit from the modern technology?

a) Yes. ☐

b) Not sure. ☐

c) No. ☐

18- How does the academic staff see the difficulties that may be faced by the growth in using learning and training via the Internet by the Saudi society and university education? (You may choose more than one answer).

18-1) Unavailability of enough funds for some society members. ☐

18-2) Poor communication infrastructure. ☐

18-3) Few persons trained in this type of technology. ☐

18-4) No acceptance of this type of learning and training by society members. ☐

18-5) No official acceptance and acknowledgement of learning via the Internet. ☐

18-6) Other obstacles. ☐

19- Does the academic staff talk with their colleagues about these obstacles?

1) Yes. ☐

2) Not sure. ☐

3) No. ☐

20- How can we overcome these difficulties? (it is possible to choose more than one answer).

20-1) Higher education establishments adopt this type of education. ☐

20-2) By supporting communication infrastructure. ☐

20-3) By activating the role of information and spreading public awareness in society. ☐

20-4) Distance training shall have priority to the academic staff. ☐

20-5) Other means. ☐

Section Three: Training in How to Use the Information Technology

21- Do you have a personal computer?

21-1) At home a) yes ☐ b) no. ☐

21-2) At the place of work a) yes ☐ b) no. ☐

22- Do you have direct access to the Internet?

a) Yes ☐ b) no. ☐

23- Do consider yourself capable of dealing with the modern technology (Internet) in remote learning?

Have long experience ☐ An expert ☐ A normal user ☐

Less experienced ☐ No experience ☐

24- Are you trained in using and benefiting from the Internet in getting information and knowing the new method in distance learning and training?

24-1) I have official training. ☐

24-2) I have personal training. ☐

24-3) I have no training at all. ☐

25- How do you see the possibility of continuing to update your knowledge with regard to computer programs and the Internet?

25-1) I will update my knowledge regularly. ☐

25-2) I will update my knowledge as need arises. ☐

25-3) I do not update my knowledge. ☐

26- Do you think the academic staff has enough time to train in modern technology using their own personal computers to develop their skills?

26-1) They all have enough time. ☐

26-2) Some members of staff in some specialization have enough time. ☐

26-3) Members of staff do not have enough time. ☐

27- Does the administration of universities and colleges encourage academic staff members to join such programs?

1) Yes. ☐

2) Not sure. ☐

3) No. ☐

28- What are your basic Internet uses? (You may choose more than one answer)

28-1) Teaching. ☐

28-2) Search for information ☐

28-3) Looking for pleasure and enjoyment. ☐

28-4) Communication with others ☐

28-5) Administrative work inside the university ☐

28-6) Other purposes ☐

29- Do you think, cooperation between staff members in universities and colleges will result in developing highly efficient training courses that would improve employee-training process?

1) Yes. ☐

2) Not sure. ☐

3) No. ☐

30- Do you believe that it is necessary to change the curricula in order to introduce modern technology in the learning and training process?

30-1) Curricula should be changed completely. ☐

30-2) Curricula should be adapted to the new method. ☐

30-3) Curricula should not be changed. ☐

31- Does the teaching staff need a training course in order to be able to deal with these curricula?

1) Yes. ☐

2) Not sure. ☐

3) No. ☐

32- Do you think there are problems associated with curricula that will show up at the introduction of modern technology into the learning and training process? For example, (how trainee obtain scientific subject, how to correct trainees answers, timing of program beginning).

1) Yes. ☐

2) Not sure. ☐

3) No. ☐

33- What are the basic benefits of using the Internet in distance training?

(You may choose more than one answer).

33-1) Reduce cost and effort ☐

33-2) Save time. ☐

33-3) No need for facilities and study theaters. ☐

33-4) Training of more people. ☐

33-5) Plenty of information sources and ease of access. ☐

33-6) Combining work and training. ☐

33-7) Others. ☐

34- What are the disadvantages of using the Internet in distance training? (You may choose more than one answer).

34-1) less interaction between trainer and trainee. ☐

34-2) Poor communication infrastructure. ☐

34-3) Useless and bad usage of the Internet. ☐

34-4) Not fully understood by some trainees. ☐

34-5) Poor credibility of such type of learning and training. ☐

34-6) It doesn't suit for all specializations. ☐

34-7) Others. ☐

Section Four: Academic Members' Attitude towards Using the Internet in Distance Training.

35- To what extent do you describe your enthusiasm to distance teaching and training using the Internet, if you get the chance to do so?

Highly enthusiastic	enthusiastic	averagely enthusiasm	less enthusiasm	Not enthusiastic
☐	☐	☐	☐	☐

36- Will you be worried if you have the chance to perform training via the Internet?

36-1) I don't feel worried ☐

36-2) I feel a little worried at the beginning. ☐

36-3) I feel more worried. ☐

37- What is the extent of your feeling of confidence when you are required to train employees through the Internet?

Highly confident ☐ confident ☐ moderately confident ☐

less confident ☐ not confident ☐

38- If you are faced with a problem when using this kind of learning, will you continue the trial till you reach a solution?

1) Yes. ☐

2) Not sure. ☐

3) No. ☐

39- Do you think you will get enough technological assistance from your organization that will enable you to use the advantages of modern technology?

39-1) I will get technological assistance in an excellent way. ☐

39-2) I will get little technological assistance. ☐

39-3) I will never get technological assistance. ☐

<u>Section Five: Students, Trainees and Curriculums.</u>

40- Will electronic learning tools such as e-mails and others contribute to improving the process of training and provide trainee with better learning experiences?

1) Yes. ☐

2) Not sure. ☐

3) No. ☐

41- Will the electronic learning tools result in an increase in interaction between trainer and trainee and among trainees themselves?

1) Yes. ☐

2) Not sure. ☐

3) No ☐

42- What is the contribution of using distance training method in improving and increasing productivity of trainees?

1) Yes. ☐

2) Not sure. ☐

3) No ☐

43- Does this method be useful in training all types of specialization?

1) Yes. ☐

2) Not sure. ☐

3) No. ☐

44- Do you think the quality of training courses via the Internet will be the same as traditional training programs?

44-1) They will have more quality than the traditional training programs. ☐

44-2) They will be equal to the quality of the traditional training programs. ☐

44-3) They will be less in quality than the traditional training programs. ☐

44-4) This depends on the way training courses are prepared. ☐

44-5) I am not sure. ☐

45- Will the training opportunities via the Internet for employees be equal to their opportunities in traditional training in future?

45-1) Training opportunities via the Internet are more than those in traditional training. ☐

45-2) Training opportunities via the Internet are equal to those in traditional training. ☐

45-3) Training opportunities via the Internet are less than those in traditional training. ☐

46- Does this type of training enhance the current shortage in traditional training?

1) Yes. ☐

2) Not sure ☐

3) No ☐

47- Is there any difference in capabilities between male and female members of staff in providing courses via the Internet?

1) Yes. ☐

2) Not sure. ☐

3) No ☐

48- Do you think that training courses via the Internet should provide equal opportunities for females as those provided to males with regard to professional development?

1) Yes. ☐

2) Not sure. ☐

3) No ☐

49- Do you think women will play a major role in future like the role played by men in developing via the Internet learning and training?

1) Yes. ☐

2) Not sure ☐

3) No ☐

50- Will the training courses via the Internet, in your opinion, be identical to traditional courses?

1) Yes. ☐

2) Not sure. ☐

3) No ☐

51- What is the role of modern technology in the learning process in Saudi Arabia?

استمارة تفريغ المقابلات الشخصية

القسم الأول :المعلومات الأساسيّة

1- الجنس

أ) ذكر ☐ **ب) أنثى** ☐

2- العمر

3- التخصص

أ) أدبي ☐

ب) علمي ☐

4- الدرجة العلمية

أ) أستاذ مساعد ☐

ب) أستاذ مشارك ☐

ج) أستاذ ☐

5- سنوات الخبرة

6- ما هي طبيعة عملك في الوقت الحاضر (تدريس / بحث /عمل إداري)؟

6- 1) التدريس ☐

6- 2) البحث ☐

6-3) خدمة المجتمع ☐

6-4) العناية بالمرضى ☐

6-5) عمل إداري داخل الجامعة ☐

6-6) أغراض أخرى ☐

7- هل سبق لك المشاركة في مؤتمرات داخليا وخارجيا؟

7-1) المشاركة في مؤتمرات داخلية

أ) نعم ☐ ب) لا ☐

7-2) المشاركة في مؤتمرات خارجية

أ) نعم ☐ ب) لا ☐

8- هل قمت بأبحاث بالتعاون مع زملاء في الجامعات الأخرى في المملكة؟

أ) نعم ☐ ب) لا ☐

القسم الثاني: التعليم العالي والإنترنت

9- ما هي طبيعة الدور الذي تقوم به الجامعات في المجتمع في رأيك؟

9-1) منح شهادات ☐

9-2) تدريب موظفين ذوي خبرة سابقة ☐

9-3) القيام ببحوث ودراسات . ☐

10- هل تعتقد أن هناك تأثير واضح للتقنية الحديثة على المجتمع السعودي؟

أ) نعم ☐

ب) غير متأكد ☐

ج) لا ☐

11- هل تعتقد أن العاملين والعاملات في المنظمات و الدوائر الحكومية في المملكة يعملون على تطوير أنفسهم ومنظماتهم على استخدام الإنترنت بنفس سرعة احتياجهم إليها؟

أ) نعم ☐

ب) غير متأكد ☐

ج) لا ☐

12- في رأيك ما هي طبيعة التعاون بين الجامعات والكليات في المملكة ؟

12-1) يوجد تعاون بشكل كبير ☐

12-2) يوجد تعاون بشكل قليل ☐

12-3) لا يوجد تعاون ☐

12-4) لا أعلم ☐

13- هل تعتقد انه من السهل لعضو هيئة التدريس المشاركة في العمل في جامعات سعودية أخرى سواء كان ذلك من خلال إجراء البحوث أو تطوير البرامج أو التّدريب؟

1-13) من السهل لعضو هيئة التدريس الانتقال بشكل رسمي ☐

2-13) من السهل لعضو هيئة التدريس الانتقال بشكل شخصي ☐

3-13) من الصعب لعضو هيئة التدريس الانتقال ☐

4-13) لا أعلم ☐

14- هل تتوقع أن الجامعات في المملكة ستكون مستعدة في المستقبل لتقديم برامج تدريبية عن بعد عن طريق استخدام الإنترنت؟

1-14) لديها استعداد في الوقت الحاضر ☐

2-14) لديها استعداد في المستقبل ☐

3-14) ليس لديها استعداد في المستقبل ☐

4-14) لا أعلم ☐

15- هل تعتقد أن دور الجامعات والكليات وأعضاء هيئة التدريس سوف يتغير جذريا في المستقبل بسبب دخول الإنترنت في عملية التعليم والتدريب؟

أ) تغير جذري ☐

ب) حدوث بعض التغييرات ☐

ج) لن يحدث تغيير ☐

د) لا أعلم ☐

16- كيف يمكن للجماعات المختلفة في المجتمع السعودي الاستفادة من تكنولوجيا المعلومات و التدريب بواسطة الإنترنت، على سبيل المثال (الرجال غير المتعلمين والنساء غير المتعلمات بشكل كافي , العمّال الأجانب وسكان المناطق النائية)؟

1-16) مهمة الجامعة ☐

2-16) توعية أفراد المجتمع ☐

3-16) اهتمام أصحاب القرار بإدخال التقنية في التعليم ☐

4-16) أخري ☐

17- هل ترى أن هناك جماعات في المجتمع السعودي لن تستفيد من هذه التقنية الحديثة؟

أ) نعم ☐

ب) غير متأكد ☐

ج) لا ☐

18- كيف يرى الأكاديميون العقبات التي قد تواجه نمو استخدام التعليم و التدريب عبر الإنترنت في المجتمع السعودي والتعليم الجامعي؟

18- 1) قلة الدعم المالي ☐

18- 2) ضعف البنية التحتية للاتصالات ☐

18-3) عدم وجود خبراء ☐

18-4) عدم تقبل أفراد المجتمع لهذا لنوع من التدريب ☐

18-5) عدم الاعتراف رسميا بالتعليم عن طريق الإنترنت ☐

18-6) أخرى ☐

19- هل يتحدث الأكاديميون مع زملائهم عن هذه العقبات؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

20- كيف يمكن التغلب علي هذه العقبات؟

20- 1) تبني مؤسسات التعليم العالي لهذا النوع من التعليم ☐

20- 2) دعم البنية التحتية للاتصالات ☐

20-3) تفعيل دور الأعلام ونشر الوعي بين أفراد المجتمع ☐

20-4) أخرى ☐

القسم الثالث : التدريب على كيفية استخدم تكنولوجيا المعلومات

21) هل لديك جهاز حاسب آلي شخصي في

1-21) المنزل أ) نعم ☐ ب) لا ☐

2-21) العمل أ) نعم ☐ ب) لا ☐

22) هل لديك اتصال مباشر بالإنترنت ؟

أ) نعم ☐ ب) لا ☐

23- هل تعتبر نفسك قادرا على التعامل مع التقنية الحديثة (الإنترنت) في التدريس عن بعد؟

ذو خبرة عالية	خبير	مستخدم عادي	قليل الخبرة	ليس لدي خبرة
☐	☐	☐	☐	☐

24- هل تدربت على كيفية استخدام والاستفادة من الإنترنت في الحصول على المعلومات والتعرف على الطريقة الجديدة في التعليم والتدريب عن بعد؟

24- 1) التدرب بشكل رسمي ☐

24- 2) التدرب بشكل ذاتي ☐

24-3) لم أتلق تدريب مطلقا ☐

25-كيف ترى إمكانية الاستمرار في تحديث معلوماتك فيما يتعلق ببرامج الحاسب الآلي والإنترنت؟

25- 1) اعمل على تحديث معلوماتي بشكل مستمر ☐

25- 2) اعمل على تحديث معلوماتي حسب الحاجة ☐

25-3) لا اعمل على تحديث معلوماتي ☐

26- هل تعتقد أن لدى أعضاء هيئة التدريس الوقت الكافي للتدرب على التكنولوجيا الحديثة بواسطة أجهزتهم الشخصية لتطوير مهاراتهم؟

26- 1) لدي جميع أعضاء هيئة التدريس الوقت الكافي ☐

26- 2) لدي أعضاء هيئة التدريس في بعض التخصصات الوقت الكافي ☐

26-3) ليس لديهم الوقت الكافي ☐

27- هل تشجع إدارات الجامعات والكليات أعضاء هيئة التدريس على الالتحاق بمثل هذه البرامج؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

28- ما هي استخداماتك الأساسية للإنترنت ؟ (من الممكن اختيار أكثر من إجابة واحدة)

1-28) التدريس ☐

2-28) البحث ☐

3-28) الترفيه والمتعة ☐

4-28) الاتصال ☐

28- 5) عمل إداري داخل الجامعة ☐

6-28) أغراض أخرى ☐

29- هل تعتقد أن التعاون بين أعضاء هيئة التدريس في الجامعات والكليات سيقود إلى أيجاد دورات تدريبية عالية الكفاءة ستحسن من عملية تدريب الموظفين؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

30- هل تعتقد أنه بالضرورة تغيير المناهج عند إدخال التقنية الحديثة في عملية التدريس والتدريب؟

1-30) يجب تغيير المناهج بشكل كامل ☐

2-30) يجب تكييف المناهج مع الوسيلة الجديدة ☐

3-30) عدم تغيير المناهج ☐

31- هل سيكون عضو هيئة التدريس بحاجة إلى دورات تدريبية لكيفية التعامل مع هذه المناهج؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

32- هل تعتقد بأن هناك مشكلات مرتبطة بالمناهج ستظهر عند إدخال التقنية الحديثة في العملية التعليمية والتدريبية ، على سبيل المثال (حصول المتدرب على المادة العلمية، كيفية تصحيح إجابات المتدربين ، توقيت بدء البرامج)؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

33- ما هي المزايا الرئيسة لاستخدام الإنترنت في التدريب عن بعد وما هي مساوئ ذلك؟

33-1) تقليل التكلفة ☐

33-2) المرونة في الوقت ☐

33-3) تقليل الجهد ☐

33-4) تدريب أعداد كبيره من المتدربين ☐

33- 5) صقل المهارات ☐

33-6) مزايا أخرى ☐

34- ما هي مساوئ استخدام الإنترنت في التدريب عن بعد ؟

34-1) الفاعلية بين المدرب والمتدرب تكون أقل ☐

34-2) ضعف البنية التحتية للاتصالات ☐

34-3) لا يصلح لجميع التخصصات ☐

34-4) عدم استيعابه من قبل بعض المتدربين بدرجة كافية ☐

34- 5) أخرى ☐

القسم الرابع: اتجاهات عضو هيئة التدريس حول استخدام الإنترنت في التدريب عن بعد

35- إلى أي مستوى تصف حماسك للقيام بالتدريس والتدريب عن بعد باستخدام الإنترنت عندما تتاح لك الفرصة؟

متحمس جدا	متحمس	متوسط الحماس	قليل الحماس	غير متحمس
☐	☐	☐	☐	☐

36- هل ستشعر بقلق عندما تتاح لك الفرصة للقيام بالتدريب عن الطريق الانترنت؟

1-36) لا أشعر بالقلق ☐

2-36) أشعر بقلق قليل ☐

3-36) أشعر بقلق كبير ☐

37- ما مدى شعورك بالثقة عند ما يطلب منك القيام بتدريب الموظفين عن طريق الانترنت؟

ثقة كبيرة جدا	واثق	متوسط الثقة	قليل الثقة	عديم الثقة
☐	☐	☐	☐	☐

38- عندما تواجهك مشكلة عند استخدامك لهذا النوع من التعليم هل ستواصل المحاولة إلي أن تصل إلى حل لها؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

39- هل تعتقد بأنك سوف تحصل على مساعدة تقنية كافية تمكنك من استخدام مزايا التقنية الحديثة بشكل كامل من قبل الجهة التي تعمل فيها؟

1-39) أحصل على مساعدة تقنية بشكل ممتاز ☐

2-39) أحصل على قليل من المساعدة التقنية ☐

3-39) لا أحصل على مساعدة تقنية ☐

القسم الخامس: الطلاب والمتدربين والمناهج

40- هل ستساهم أدوات التعليم الإلكتروني كالبريد الإلكتروني وغيرها في تحسين عملية التدريب وتزويد المتدربين بخبرات تعليمية افضل؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

41- هل سيؤدي إلى زيادة الفاعلية بين المدرب والمتدرب وبين المتدربين أنفسهم؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

42- ما مدى مساهمة استخدام أسلوب التدريب عن بعد في تحسين وزيادة الإنتاجية للمتدربين في رأيك؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

43- هل سيفيد هذا الأسلوب في التدريب جميع التخصصات؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

44- هل تعتقد أن جودة دورات التدريب عن طريق الإنترنت ستكون كبرامج التدريب التقليدية؟

1-44) اكثر جودة من البرامج التدريبية التقليدية ☐

2-44) مساوية لجودة البرامج التدريبية التقليدية ☐

3-44) اقل جودة من البرامج التدريبية التقليدية ☐

4-44) غير متأكد ☐

45- هل ستكون فرص التدريب عن طريق الإنترنت للموظفين مساوية لفرصهم في التدريب التقليدي في المستقبل؟

45-1) فرص التدريب عن طريق الإنترنت اكثر من فرص التدريب التقليدي ☐

45-2) فرص التدريب عن طريق الإنترنت مساوية لفرص التدريب التقليدي ☐

45-3) فرص التدريب عن طريق الإنترنت اقل من فرص التدريب التقليدي ☐

46- هل يعزز هذا النوع من التدريب النقص الحاصل في التدريب التقليدي؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

47- هل هناك فرق في القدرات بين النساء والرجال من أعضاء هيئة التدريس في القيام بالتدريب عن طريق الإنترنت؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

48- هل تعتقد أن دورات التدريب عن طريق الإنترنت يجب أن توفر فرص متكافئة للنساء كتلك التي للرجال فيما يختص بالتطوير الوظيفي؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

49- هل تعتقد أن المرأة ستلعب دوراً رئيس في المستقبل كدور الرجل في تطوير التعليم و التدريب عن طريق الإنترنت؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

50- هل ستكون الدورات التدريبية عن طريق الإنترنت مماثلة للدورات التقليدية في رأيك؟

1) نعم ☐

2) غير متأكد ☐

3) لا ☐

51- ما هو دور التقنية الحديثة في العملية التعليمية في المملكة العربية السعودية بشكل عام؟

Appendix F: Personal and Demographic Information Related to the Study Sample

Personal and Demographic Information for the Questionnaire's Sample

It is assumed for reasons already explained in (Chapter Four), that the personal and demographic information about academic staff has an influence on their attitudes. The following tables summarize information about the faculty members who contributed in this study:

Gender and Specialisation

Table 1
Distribution of the Questionnaire Sample by Gender

Gender	Frequency	Percent
Male	125	53.2%
Female	110	46.8%
Missing	-	-
Total	235	100%

Table 2
Distribution of the Questionnaire Sample by Specialisation

Specialisation	Frequency	Percent
Art	125	53.2%
Science	108	46.0%
Missing	2	.8%
Total	235	100%

A consideration of Tables 1 and 2 show that male academic staff exceeded the number of females though the difference was small. Art specialisation represented 125 (or 53.2%) of the participating faculty members, while science specialisation represented 108 (or 46%). This specialization distribution can be attributed to the higher number of academic staff who specialized in art major subjects more than the number of academic staff who specialized in science major subjects in Saudi universities and higher education institutions.

Age Group and Academic Position

Table 3
Distribution of the Questionnaire Sample by Age

Age	Frequency	Percent
31-40	105	44.7%
41-50	100	42.6%
More than 50	24	10.2%
Missing	6	2.6%
Total	235	100%

Table 4
Distribution of the Questionnaire Sample by Academic Position

Academic Position	Frequency	Percent
Assistant Professor	175	74.5%
Associate Professor	38	16.2%
Full Professor	20	8.5%
Missing	2	.8%
Total	235	100%

Table 3 and 4 show that distribution of the participating faculty by age. This ranged between 31- 50 years and was as follows: 105 academic staff (or 44.7%) were between ages 31 and 40 years, 100 academic staff (or 42.6%) were between ages 41 and 50 years, only 24 academic staff (or 10.2%) were more than 50 years. This age distribution can be attributed to the higher education system, where academic staff who have a PhD are normally 31 years old or more. As to faculty members' rank, the distribution of the participating faculty was as follows: the majority of academic staff 175 (or 74.5%) were assistant professors, while 38 of academic staff (or 16.2%) were associate professors and only 20 academic staff (or 8.5%) were full professors.

Teaching Experience

Table 5
Distribution of the Participating Faculty by Teaching Experience

Teaching Experience	Frequency	Percent
1 to 5 years	58	24.7%
6 to 10 years	29	12.3%
11 to 15 years	45	19.1%
More than 15 years	101	43.0%
Missing	2	.9%
Total	235	100%

The distribution of the 235 participating faculty members according to years of teaching experience was found to be as follows: approximately quarter (24.7%) or 58 of academic staff between 1 to 5 years, while 29 academic staff (or 12.3%) between 6 to 10 years and 45 academic staff (or 19.1%) between 11 to 15 years. Finally, the majority of academic staff 101 (or 43%) more than 15 years of teaching experience (See Table 5).

Personal and Demographic Information for the Interview's Sample

Part of the data for this research was collected from twenty-four universities and colleges' academic staff. Data from the questionnaire was supplemented by data from 24 interviews, some of which were conducted by telephone. The general characteristics of the interviewees are as follows:

Gender and Specialization

Tables 6 and 7 show that males who responded to interview represented 16 (or 66.7%) of the participating faculty members, females represented 8 (or 33.3%). It can be seen also from the Table that specialisation of academic staff was as follow:

Art specialisation represented 13 (or 54.2%) of the participating faculty members, while science specialisation represented 11(or 45.8%).

Table 6
Distribution of the Interview Sample by Gender

Gender	Frequency	Percent
Male	16	66.7%
Female	8	33.3%
Total	24	100%

Table 7
Distribution of the Interview Sample by Specialisation

Specialization	Frequency	Percent
Art	13	54.2%
Science	11	45.8%
Total	24	100%

Age Group and Academic Position

Tables 8 and 9 reveal that eleven academic staff (or 45.8%) had ages ranging from 31 to 40, ten academic staff (or 41.7%) indicated that their ages was between 41 and 50, and two academic staff (or 8.3%) indicated that their ages was more than 50 years. Regarding to academic position, it was as follows: 15 respondents (or 62.5%) were assistant professor, 9 respondents (or 37.5%) were associate professor.

Table 8
Distribution of the Interview Sample by Age Group

Age Group	Frequency	Percent
31- 40	11	45.8%
41 – 50	10	41.7%
More than 50	2	8.3%
Missing	1	4.2%
Total	24	100%

Table 9

Distribution of the Interview Sample by Academic Position

Academic Position	Frequency	Percent
Assistant Professor	15	62.5%
Associate Professor	9	37.5%
Full Professor	-	-
Missing	-	-
Total	24	100%

Teaching Experience

Table 10

Distribution of the Participating Faculty by Teaching Experience

Teaching Experience	Frequency	Percent
1 to 5 years	8	33.3%
6 to 10 years	2	8.3%
11 to 15 years	5	20.8%
More than 15 years	9	37.5%
Total	24	100%

The distribution of the 24 participating faculty members according to the years of teaching experience was found to be as follows: 8 academic staff (or 33.3%) between 1 to 5 years, 2 academic staff (or 8.3%) between 6 to 10 years, 5 academic staff (or 20.8%) between 11 to 15 years,and 9 academic staff (or 37.5%) more than 15 years of teaching experience (See Table 10).

Appendix G: Gender Significant Differences

1. Differences of academic staff's attitudes with reference to gender

To obtain a more complete picture, a further test was carried out such as T-test analysis, which performed in order to compare the attitudes of the two groups of gender, (male and female) toward in-service training via the Internet and to determine if there were significant differences between these groups in each section. The accepted "p" level of statistical significance was $P < 0.05$. Because of the 0.05 level of significance was used as a criterion for testing the null hypotheses involved in the study.

1.1 Information technology training and evaluation of their training (gender)

In the Table 1 the factors with significant differences are presented, with the means and standard deviation for two groups. The table shows that there are no significant differences between the means of the two groups, male and female, in their attitudes of their information technology training, which they had received, and their evaluation of their training. The statistical results can be summarized as follows: (a) information technology and Internet training of the academic staff ($1.3587 < 1.3821$, $t = -.73$ and $p = .657 > 0.05$). (b) Academic staff evaluation of the training they have received ($3.7436 < 3.8056$, $t = -.46$ and $p = .398 > 0.05$).

Table 1. Comparison of the extent to which Male and Female Faculty Member have Information Technology Training and Evaluation of their training

Factor	Variable	Number	Mean	Std Dev*	T – value	2-Tail Sig**	P-value
Information technology and Internet training of the academic staff	Male	125	1.3587	.238	-.73	.464	.657
	Female	110	1.3821	.251			
Academic staff evaluation of the training they have received	Male	65	3.7436	.807	-.46	.647	.398
	Female	51	3.8056	.593			

(*) Standard Deviation
(**) 2-Tail Significant
$P < 0.05$

1.2 Faculty Members' Attitudes Toward E-learning and In-Service Training (gender)

Are there differences between male and female academic staff with respect to their attitudes toward employees training through the Internet? In Table 2 the factors with significant differences are presented, with the means and standard deviation for two groups. The table shows that there are no significant differences between the means of the two groups, male and female, in their attitudes toward in-service training by the Internet. In other words, there was not any factor with significant differences. The statistical results can be summarized as follows: (a) Enthusiasm ($3.9840 > 3.9394$, $t = .53$ and $p = .074 > 0.05$). (b) Anxiety ($3.6579 > 3.3997$, $t = 3.26$ and $p = .080 > 0.05$). (c) Usefulness of e-learning tools ($3.7534 < 3.7762$, $t = -.25$ and $p =$

.508 > 0.05). (d) Impacts of information technology on the Saudi society (3.9813> 3.9174, t = .91 and p = .321 > 0.05). (e) Affect the productivity of academic staff and trainees (3.9954 < 3.9964, t = -.01 and p = .156 > 0.05). (f) Gender issues in using the Internet (3.9187 < 4.1173, t = -2.26 and p = .573 > 0.05). (g) Faculty members' confidence of using the Internet (3.5484 > 3.4198, t = 1.66 and p = .089 > 0.05).

Table 2.Comparison of the Attitudes of Male and Female Faculty Members Toward E-learning and In-Service Training

Factor	Variable	Number	Mean	Std Dev*	T – value	2-Tail Sig**	P-value
Enthusiasm	Male	125	3.9840	.571	.53	.598	.074
	Female	110	3.9394	.723			
Anxiety	Male	123	3.6579	.535	3.26	.001	.080
	Female	103	3.3997	.657			
Usefulness of e-learning tools	Male	121	3.7534	.708	-.25	.802	.508
	Female	105	3.7762	.644			
Impacts of information technology on the Saudi society	Male	125	3.9813	.507	.91	.361	.321
	Female	109	3.9174	.562			
Affect the productivity of academic staff and trainees	Male	125	3.9954	.488	-.01	.989	.156
	Female	108	3.9964	.575			
Gender issues in using the Internet	Male	123	3.9187	.694	-2.26	.024	.573
	Female	108	4.1173	.630			
Faculty members' confidence of using the Internet	Male	124	3.5484	.628	1.66	.098	.089
	Female	108	3.4198	.539			

(*) Standard Deviation
(**) 2-Tail Significant
P < 0.05

1.3 Higher education and the Internet in Saudi Arabia (gender)

However, in Table 3, are there significant differences between male and female academic staff with respect to their attitudes toward higher education and the Internet in Saudi Arabia? The factors with significant differences are presented, with the means and standard deviation for two groups. The table shows that there are no significant differences between the means of the two groups, male and female, in their attitudes toward in-service training by the Internet. In other words, there was not any factor with significant differences. The statistical results can be summarized as follows: (a) Curricula change (3.8049 > 4.1651, t = -3.82 and p = .061 > 0.05). (b) Co-operation between higher institutions (3.9445 < 3.9817, t = -.58 and p = .995 > 0.05). (c) Advantages online training and teaching (4.0619 > 4.0141, t = .81 and p = .960 > 0.05). (d) Difficulties of the online training and teaching (3.0685 < 3.7318, t = -6.10 and p = .247 > 0.05). (e) Expectations of the online training and teaching in Saudi Arabia (3.5890 < 3.6831, t = -1.52 and p = .399 > 0.05).

Table 3. Comparison of the Attitudes of Male and Female Faculty Members Toward Higher Education and the Internet in Saudi Arabia

Factor	Variable	Number	Mean	Std Dev*	T – value	2-Tail Sig**	P-value
Curricula change	Male	123	3.8049	.786	-3.82	.000	.061
	Female	109	4.1651	.631			
Co-operation between higher institutions	Male	125	3.9445	.485	-.58	.565	.995
	Female	110	3.9817	.502			
Advantages online training and teaching	Male	124	4.0619	.440	.81	.420	.960
	Female	110	4.0141	.466			
Difficulties of the online training and teaching	Male	124	3.0685	.866	-6.10	.000	.247
	Female	110	3.7318	.787			
Expectations of the online training and teaching in Saudi Arabia	Male	124	3.5890	.451	-1.52	.129	.399
	Female	110	3.6831	.492			

(*) Standard Deviation
(**) 2-Tail Significant
P < 0.05